

PRICES-CURRENT (retail) of Food-grains and Salt in the Head

Number.		DISTRICTS.	QUANTITIES PER RUPEE IN																	
			WHEAT.			BARLEY.			RICE, BEST SORT.			RICE, COMMON.			JOWAR OR CHOLU. (Sorghum Vulgare.)					
			Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.			
BENGAL.																				
BOARDWATER DIVISION.	1	Bardwan	...	...	8 8	9 8	...	...	...	11 4	11 4	9 12	13 14	13 14	11 0	...	...	...
	2	Birbhum	...	8 0	8 4	8 0	...	...	...	9 0	9 0	7 8	13 8	13 8	9 12	...	...	...
	3	Bankura	...	9 0	9 0	9 0	...	...	...	10 0	10 0	10 0	15 0	15 0	11 8	...	...	...
	4	Midnapore	...	8 0	8 0	8 0	...	...	...	{ 10 0 to 11 0 }	10 0	8 8	13 12	13 0	11 0	...	...	...
	5	Hooghly	...	10 0	10 0	9 0	...	...	...	7 8	7 8	7 8	11 0	11 0	9 8	...	...	...
	6	Howrah	...	...	...	...	...	...	...	10 0	9 8	{ 8 old new 9 0 }	13 0	11 6	10 8	...	...	...
PRESIDENCY DIVISION.	7	24-Parganas	...	...	...	...	...	...	8 14	8 14	8 0	11 14	11 14	10 0	...	...	...
	8	Calcutta	...	10 0	8 10	8 0	12 4	10 10	11 13	6 10	6 10	6 6	8 0	8 0	8 0	12 4	12 4	11 10		
	9	Nadia	...	9 2	8 0	9 5	...	...	...	5 15	5 15	6 11	12 7	12 0	9 9	...	...	...
	10	Murshidabad	...	12 0	10 0	10 0	...	16 0	10 0	10 12	10 8	8 8	14 8	13 12	10 2	...	...	...
	11	Jessore	...	8 0	8 0	7 0	10 0	10 0	10 0	10 0	10 0	10 0	13 0	13 0	11 0	...	...	...
	12	Khulna	...	...	...	...	...	...	...	12 0	12 12	10 4	14 4	14 4	12 12	...	...	...
RAJSHAH DIVISION.	13	Rajshahi	...	new 13 8	8 4	10 2	new 18 12	...	13 8	6 0	6 0	8 4	13 8	12 12	10 2	...	...	...
	14	Dinajpur	...	9 9	8 7	8 0	8 0	8 0	...	10 3	10 3	7-12-4	14 5	13 8	10-8-1	...	...	...
	15	Jalpaiguri	...	8 4	8 0	8 8	...	...	...	5 4	5 4	7 0	12 8	12 8	9 0	...	...	...
	16	Darjeeling	...	8 0	8 0	6 0	8 0	7 0	8 0	5 8	5 0	5 8	11 0	11 0	8 8	...	...	...
	17	Rangpur	...	7 0	7 0	7 0	...	...	...	8 0	8 0	8 0	12 0	12 0	10 0	...	...	...
	18	Bogra	...	7 8	7 8	7 8	...	...	...	8 4	8 4	7 8	12 12	12 0	10 14	...	...	...
DACC DIVISION.	19	Pabna	...	8 0	8 0	9 0	12 0	12 0	15 0	6 0	6 0	6 0	12 0	11 10	10 8	...	...	...
	20	Dacca	...	8 0	8 0	8 4	new 26 0	13 4	...	10 0	10 0	9 4	11 12	12 0	10 0	...	...	...
	21	Mymensingh	...	8 0	8 0	7 0	...	...	...	7 8	7 8	6 0	10 0	10 0	9 0	...	...	...
	22	Faridpur	...	...	...	...	...	...	...	5 8	5 8	5 8	12 0	11 8	10 0	...	...	...
	23	Backergunge	...	...	...	...	...	...	...	11 8	11 12	10 0	12 0	12 0	10 4	...	...	...

- A. In the subdivisions the retail prices of salt per rupee are:—Kaina 10 seers (panga) and 11 seers (karkatch); Katwa 11½ seers; Raniganj 10½ seers.
- B. At Rampur Hat the retail price of salt is 11½ seers per rupee.
- C. At Vishnupur the retail price of salt is 9½ seers per rupee.
- D. In the subdivisions the retail prices of salt per rupee are:—Contal 9 seers; Tamluk 10 seers; Ghatal 10½ seers.
- E. In the subdivisions the retail prices of salt per rupee are:—Serampore 10½ seers; Jahanabad 10 seers.
- F. At Ulubaria the retail price of salt is 10 seers 10½ chitaks per rupee.
- G. In the marts in the interior of the district the retail prices of salt per rupee are:—Ohetla 10½ seers, Barasat 10 seers, Baduria 10½ seers; Magrahat 9½ seers.
- H. In the subdivisions the retail prices of salt per rupee are:—Kushtia (Bahadurkhal) 10½ seers (panga); Chuadanga 10 seers (panga); Moherpur 10 seers (crushed); Ranaghat 10 seers (crushed).
- I. In the subdivisions the retail prices of salt per rupee are:—Lalbagh 11 seers (karkatch); Kandi 10½ seers; Jangipur 10½ seers.
- J. In the subdivisions the retail prices of salt per rupee are:—Jhenida 9 seers 1 chitak; Magura 9½ seers; Narail 8 seers 11 chitaks; Bongaon returns not received.

and conducting the miscellaneous enquiries which might be ordered by the Collector.

In January in the light of the discussions at the Conference at Muzaffarpur and of the experience of the Government of the North-Western Provinces, as stated in their Resolution of the 5th December, a change was decided on in the classification of labourers and in the exaction of the task. The classification was simplified by reduction to two classes—

Modification made in the system adopted from the North Western Provinces.

- (i) B. Able-bodied workers.
- (ii) D. Workers, but fit for light work only.

In two important respects the system adopted in the North-Western Provinces was, however, departed from. In the first place, the responsibility of the Collector for the administration of all famine relief in his district was maintained, and all officers of the Public Works Department in the district were declared (except in matters of purely professional detail) to be under the direct control and supervision of the Collectors, while officers whose duties carried them over more than one district were subordinated directly to the Commissioner of the Division. In the second place, not only the diggers, but carriers also, and the length of lift and lead were to be taken into consideration in fixing the amount of the task to be demanded from every gang of workers. At first attempts were made to form gangs comprising 60 to 70 members, and the task was worked out for the gang as a whole with due regard to considerations of length of lift and lead, but difficulties being experienced in getting the people to form themselves into such large gangs, the attempt was abandoned on the visit of the Lieutenant-Governor to Bihar, in favour of the system which, with slight modifications of detail, was followed in principle for the remainder of the famine wherever task-work was adopted. Under this final system the pit gang became the unit, consisting as a rule of about four diggers in a pit with a number of carriers adjusted to the conditions of lead and lift, each pit gang being treated and paid as a separate unit. The change was introduced from about the middle of March.

The pit gang system.

Tasks. The fixing of tasks at the outset by individual Collectors according to the general instructions of the Code has already been mentioned. Great assistance was afforded by the introduction of Mr. Glass's tables, but the original tables did not contain specific tasks for carriers. This omission was, however, soon supplied when the system of pit gangs was introduced. The standard task as finally prescribed was as follows:—

In soft soil the excavation of 200 cubic feet per digger.				
In medium	"	"	125	" "
In hard	"	"	85	" "

The task for carriers was regulated by the horizontal distance of the pit from the spoil-bank, i.e., the lead, and the vertical height to the spoil-bank from the centre of the pit excavated, i.e., the lift. The general nature of these variations may be indicated by the task set for carriers in soft soil (which constituted the greater part of the soil met with), when three carriers were allowed for the removal of one digger's task, or 200 cubic feet of earth, with a minimum lead of 100 feet, two additional carriers being allowed for every additional 25 feet of lead or two feet of excavation. The basis of the calculation was the assumption of the average task for a carrier as 75 cubic feet over a lead of 100 feet and 2 feet lift. The scale allowed, however, was slightly more liberal.

As work went on, various devices were adopted for facilitating measurement and check. The chief of these was that introduced by Mr. Blackwood, Assistant Magistrate at Danbhanga, on the works in his charge. Instead of paying up

The Blackwood system.

the gangs and fining them at the end of each day for short work done, the task, after it was once set out, was not paid for until it had been accomplished. If the gang worked well, the task could be finished in one day and the full wage for one day taken; if idle, the work might drag on to two days, but the full wage of one day only would nevertheless be paid. The system was practically therefore one of piece-work with a maximum wage. The pit gang was not permitted to do more than the task in one day or to earn more than the one day's wage. The system was brought to general notice and introduced largely elsewhere. Its advantages were that while no one got paid for more than his work, an inducement to work hard was held out; at the same time the check on cheating was facilitated and an orderly arrangement on the work was maintained by ensuring that all pits should be carried down to the same level at the same time.

The systems of payment adopted varied with the systems of organising labour. The procedure contemplated by the Famine Code is the setting out of an individual task to each member of the gang, the daily measurement of each digger's task so done and calculation of the amount earned, and the payment of the aggregate earnings of the gang in a lump sum to the headman. The attempts to carry out this system, which were made at the commencement of operations, proved that it was unworkable. It was impossible to measure up individual tasks within a reasonable time; gangs consequently got into arrears with their pay, and facility was afforded for fraud. The next stage was to measure the work of the gang as a whole, paying the total wages earned to the headman and leaving him to distribute it among the workers. Time was thus saved over the measurement; but opportunities still continued for malpractices, while discontent soon arose among the members of the gang who found themselves dependent on the distribution of the headman for the amount of their earnings, and individuals who worked hard were fined alike with the idle members of the gang for failure to perform the proper task. If the digger only were tasked, the number of carriers being left to regulate themselves and no definite task being exacted from them, all that was necessary was to measure the digger's work and to pay his carriers; if the work done was short, the carriers were fined along with the digger. This was done in some places for a short time before receipt of the final orders of Government on the subject, but the same discontent continued, while the absence of check over the number of carriers allowed scope for swindling, and the measurement of the work done by individual diggers was as before, a lengthy undertaking. The large gang system and the payment to the gang as a unit was open to similar objections, and a satisfactory arrangement was not arrived at until the introduction of the small pit gang. Measurement was then possible and simple, as long as the proper arrangement of the pits was maintained. The gangs were small, and composed for the most part of relatives or kinsfolk, thus removing the objections to the innocent members being fined for the lazy with whom they had no interest or connection. The power of the pay muharrir to inflict a fine for short work, however, still continued, and constituted a defect in the system. One great merit of the system introduced by Mr. Blackwood was the avoidance of this difficulty. The workers knew what they had to do and what they would receive on its completion, and the power of the muharrir to impose upon their ignorance was correspondingly diminished.

For the calculation of wages two methods are prescribed by the Famine Code; after quantitatively describing the full and minimum ration for labourers, the full and minimum wage is defined as the amount of money which at the current rates is sufficient to purchase a full and minimum ration respectively. This amount can be calculated in two ways; either by totalling the money values of the several items of the ration, or secondly, by taking the money value of the "grain equivalent," by "grain equivalent" being meant the amount of grain of which the value is in ordinary times equivalent to the total value of the various items of the ration. In other words, the various items of the ration are, as a matter of convenience, reduced to a single basis and expressed in terms of a staple grain, the value of which represents the wage. The second method of calculation was that adopted in Bihar.

The maximum and minimum rations taken expressed in terms of chitaks by the standard weight, were as follows:—

RATE.	Class.	Adult males.	Adult females.	CHILDREN—	
				Big.	Small.
1	2	3	4	5	6
		Ch.	Ch.	Ch.	Ch.
Maximum ...	B	19	17	9	6
	D	14	13	6	6
Minimum ...	All	14	13	6	6

The money wage so calculated varied in every district and in the same district from time to time according to the different staple which was taken as the grain equivalent. At an early stage, however, it was found that as long as the labourers were to receive a minimum wage, irrespective of the amount of the task done, there were large numbers who would rather rest content with the smaller wage than exert themselves to earn the full wages by performing the full task. The penal wage was therefore introduced in January as a fine for wilful and contumacious idleness, and if even this failed, it was to be followed by ejection from the works. The people in Bihar with the traditions of 1874 still surviving, were at first disposed to think that Government was willing to support all who came to the relief works whether they performed any task or not. The Lieutenant-Governor therefore issued peremptory orders in January to the effect that those who were able to do a fair day's work and refused to do so, or to submit themselves to discipline, were presumably not in need of relief and need not be admitted on to the works. The issue of these orders was at first followed by temporary strikes, but as soon as it became apparent to the labourers that strikes hurt no one but themselves, they grew less in number and ultimately practically died out.

The average wages paid throughout the famine to all relief-workers of all kinds taken together varied very little in different districts, and is shown below:—

	Shahabad.	Saran.	Champan.	Muzaffarpur.	Darbhanga.	Bhagalpur.	Southal Far- gana.	Hazibagh.	Falgun.	Manbhum.	Bankura.	Nadia.	Murshidabad.	Khanna.	Purl.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Average wages paid per head.	A. P. 1 3	A. P. 0 11	A. P. 1 2	A. P. 1 2	A. P. 1 3	A. P. 1 1	A. P. 1 7	A. P. 1 8	A. P. 1 8	A. P. 1 8	A. P. 2 6	A. P. 1 9	A. P. 2 1	A. P. 1 2	A. P. 1 10
Average wages paid per male unit.	A. P. 1 7	A. P. 2 5	A. P. 1 0	A. P. 1 6	A. P. 1 0	A. P. 1 4	A. P. 1 11	A. P. 2 0	A. P. 2 0	A. P. 2 0	A. P. 2 9	A. P. 2 0	A. P. 2 2	A. P. 2 3	A. P. 2 2

The expression "male unit" which frequently recurs in famine literature in connection with the relief works, denotes the unit arrived at by considering a woman as equal to three-fourths of a man, a big child to one-half, and a small child to one-quarter. In speaking of gratuitous relief, as will be shown later the corresponding term is adult unit, there being no difference recognised in this form of relief between men and women, and a child of whatever age being counted as half an adult.

But the elaborate details of wages and tasks were superseded to a great extent during the later stages of the famine by the introduction of a system of piece-work. The

system being condemned by the Code, it was not adopted generally at the commencement of operations, although in the relief works under the Maharaja of Darbhanga it was followed throughout. In February 1897 the Government of India, while discussing the principles that regulate expenditure on famine relief works, held that although where acute distress prevails and it is necessary to provide employment, not only for the able-bodied, but for a large proportion of inefficient labour, task-work must be rigorously enforced, yet when distress is not sufficiently acute to drive on to the relief works a large proportion of persons unaccustomed to work, payment by results is a more economical method than that of task-work. At the same time an intermediate system already in force in the North-Western Provinces, was described, which was in effect a system of petty contracts, although subsequently modified so as to dispense with the middlemen. At the request of the Government of India, the suitability of such a system to the circumstances of the affected districts in Bengal was considered, and finally in May the extension of a system of piece-work, subject to the supervision and measurement of the task by Government officials without the introduction of the petty contractor, was sanctioned on the relief works in the Presidency, Chota Nagpur, Bhagalpur, Rajshahi and Orissa Divisions, and in selected areas and works in the Patna Division. The advantages of the system were considered to lie in the avoidance of the necessity for the large establishment required on task-works with their complications of maximum and minimum wages and fines; the reduction of the numbers on gratuitous relief by enabling the able-bodied members of a family to earn sufficient to support their dependants; and the affording of all the relief necessary in tracts where distress was not acute, at a much less cost than under the provisions of the Code. At the same time a possible drawback to the system was recognised, in so far as it might be possible under it for able-bodied professional labourers to earn more than was actually required for the maintenance of themselves and their families, while the weaker portion of the population might be unable to earn sufficient for a bare subsistence. It was therefore decided to fix the rates to be offered with reference to the price of food, the quantity of it required to keep the labourers and their dependants in health, and the amount of work which a famine labourer might ordinarily be expected to perform. The rates thus prescribed, with rice selling at 9 seers to the rupee, and a lead of 50 feet with lift of 3 feet, were for—

				Rs. A. P.			
Soft	soil	...	...	...	1	12	0 per 1,000 cubic feet.
Medium	"	...	...	...	2	4	0 ditto.
Hard	"	...	...	...	2	12	0 ditto.

These rates were sanctioned as standards, with discretion to increase or lower them, and an allowance of an additional 3 annas per 1,000 cubic feet for every additional 50 feet of lead or 3 feet of lift. At the same time the names of the dependants of workers under the piece-work system were to be removed from the lists of gratuitous relief, and no work on a system of task-work was to be opened within a distance of at least five miles from a work so conducted.

In the Bhagalpur Division, from the beginning of January till the end of May, the system of the Famine Code was followed; after that piece-work was adopted. In the Jamtara subdivision of the Sonthal Parganas, after starting with the organisation of the Code and developing into the system of the pit gang, the piece-work was finally resorted to; in the Deoghur subdivision piece-work alone was adopted. In the Chota Nagpur Division works were carried out on the piece-work system, except for a few weeks at the commencement in Hazaribagh and Palamau, where the amount of work which could be done in one day was restricted to a maximum. In Bankura works started on the Code system, but were converted into piece-work from July. Both systems were also in force in the affected districts of the Presidency Division; the piece-work system at the later stage.

The following statement shows the number and nature of the Government relief works undertaken, whether by civil agency or under the supervision of the Public Works Department, in each affected Division:—

Division.	Wells.	Tanks and irrigation reservoirs.	Roads.	embankments.	Embankments.	Roads on which metal collected.	Canals and irrigation channels.	Other works.	Total.
1	2	3	4	5	6	7	8	9	10
Patna	1	404	416	2	13	...	43	23	901
Bhagalpur ... ..	...	31	21	...	...	...	...	...	58
Chota Nagpur	7	235	98	...	...	4	1	...	345
Burdwan ... ..	...	3	38	...	6	1	...	...	40
Presidency ... ..	...	63	79	...	1	1	2	...	145
Orissa ... ..	...	28	2	...	11	...	1	...	48
Total	8	765	631	2	30	6	48	23	1,531

Out of a total, therefore, of 1,531 works undertaken, no less than 1,416 were either tanks and reservoirs, or earthwork on roads. Different local conditions determined the description of work to which preference was given. Thus in the Patna Division in Champaran, where the District Board was too poor to undertake the upkeep and bridging of expensive embanked roads, tanks were chiefly resorted to; in Saran, where there was a prejudice against tanks, and in Muzaffarpur, where special attention was given to improving communications, roads were the chief form of work; in Darbhanga roads and tanks were in about equal proportions. In the Chota Nagpur Division irrigation reservoirs were largely adopted as relief works; in Bankura attention was chiefly paid to roads, but in the Presidency Division, notably in Khulna, the improvement of the water-supply was held chiefly in view. In all Divisions the works undertaken are reported to be works of permanent utility. Communications have been improved by the roads raised and widened; the opportunities for irrigation have been vastly increased by the tanks and reservoirs dug, and at the same time the supply of drinking-water has been added to and purified. The earthwork of one railway (Sakri-Jainagar) has been finished, and fair progress made upon the embankment of another (Bettiah-Bagaha); in North Bihar great progress was made with five irrigation projects, the most important of which, the Trebeni Canal, will, when completed, render the whole of the north of the Bettiah subdivision in Champaran safe from famine; in the Chota Nagpur Division an important irrigation scheme from the Nadaura river in Palamanu was taken in hand, and in the Presidency Division the excavation of the Bhairab Canal has immensely improved the water-supply of a large portion of the Meherpur subdivision.

It is difficult to say how far the cost of the relief works undertaken

Comparison between actual cost of relief works and the probable cost incurred if they had been executed under normal conditions.

differed from the cost which would have been incurred if they had been executed in a normal year in the ordinary manner. Although in the later stages of the famine, and especially after the introduction of piece-work, careful estimates were prepared of the actual amount of earthwork to be done, and preliminary measurements taken, in the rush of opening new works at the outset with an untrained and inexperienced establishment, this precaution was very often omitted, and subsequent calculation was impossible in existing tanks which were being deepened, and not newly dug. The Commissioner of Patna is of opinion that, roughly speaking, the relief works probably cost a third more than they would have done under ordinary conditions. The Collectors of Bhagalpur and the affected districts of the Chota Nagpur Division, and of Murshidabad and Khulna in the Presidency Division, estimate that the works undertaken under famine conditions were done at the ordinary rates prevailing for execution of such works and in some cases at less than ordinary rates. The much smaller part played by task-work in these districts would presuppose better results than in North Bihar, but the calculation assumes that the measurements reported were absolutely correct. The Collector of Nadia estimates the cost at about 6 per cent. above ordinary rates. With regard to works conducted under the supervision of the Public Works Department, as was to be anticipated, the quality of work done from a

professional standpoint was better than that upon the civil works. The supervising staff upon the works under the Public Works Department was as a rule stronger than that under the civil agency and in technical knowledge far superior. The same doubts as to the measurements recorded need not therefore be allowed for. The Chief Engineer states that the quantity of work shown as executed in all the Public Works Divisions may be accepted as absolutely accurate, satisfactory check measurements having been taken in nearly every case, while the cost rates of earthwork done as a whole did not differ materially from the normal contractors' rates of ordinary years.

During the course of the famine the question was raised whether large works at a distance from the labourers' homes would not be preferable to a number of small ones near their village. It was suggested that the scattered character of the relief works added greatly to the difficulty of efficient supervision and to the enforcement of labour tasks, and that greater resort might be had to large works professionally managed. In reply, it was pointed out that the question of drafting off labourers to large works was one which had been left by the Government of India to the discretion of the Lieutenant-Governor, and that while instructions had been issued that it might be desirable to draft off able bodied labourers to large works within reasonable distance of their homes, yet for those unaccustomed to labour and unable or unwilling to move long distances, works must be provided near their villages. At the same time it was not found desirable to lay down a hard-and-fast rule. In practice it was found impossible to concentrate labourers upon large works. With the exception of professional labourers the relief labourers would not go into camp taking their families with them, while there were not many large works available for their employment, and the depletion of the staff of the Public Works Department caused difficulties in finding the necessary establishment. Where relief operations had, as was the case, been undertaken in time, the difficulties of securing correct measurements and enforcing a task were minimised, and any attempt to alter the system adopted during the course of the famine would have been most disastrous.

The following statement shows the average number of square miles to each relief work in each affected district at the time when the maximum number of works were open:—

DIVISION.	DISTRICT.	Average number of square miles to each work.
PATNA	Shahabad	163.2
	Saran	43.81
	Champanan	32.47
	Muzaffarpur	22.42
	Darbhanga	15.46
	Whole Division	29.1
BHAGALPUR	Bhagalpur	29.4
	Sonthal Parganas	50.8
	Whole Division	42.35
CHOTA NAGPUR	Hazaribagh	35.71
	Palamau	83.27
	Manbhum	82.27
	Whole Division	67.34
BURDWAN	Bankura	32.9
PRESIDENCY	Nadia	27.5
	Murshidabad	7.9
	Khulna	12.8
	Whole Division	17.5
ORISSA	Puri	18.05

No general conclusion can be drawn from the results in Shahabad, Murshidabad, and Khulna, where distress was essentially localised. Apart from these two districts, the average number of square miles to a relief work varied from 83·27 in Palamau to 15·46 in Darbhanga.

The relative advantages of small works near the labourers' villages and large works on to which the labourers can be drafted with the advantage of the distance test, have again been considered in the light of the experience of the famine, and the opinions of the District Officers in North Bihar are unanimously in favour of the policy which was adopted. The matter is summed up by the Commissioner as follows:—

"I am strongly of opinion that in a tract of country where the conditions are such as prevail in Bihar, it is impossible to enforce such a policy. The population is excessively dense, the people almost entirely agricultural, and extraordinarily averse to movement from their villages. I feel no doubt that if only large works were opened at long intervals, the result would be that numbers of those who are in real need of relief would refuse to go to them at the cost of leaving their homes and holdings: if the policy were persisted in long enough, starvation would eventually drive a certain number to the works, abandoning everything, but before this happened great mortality would have occurred, and the survivors would arrive in an emaciated and reduced condition, incapable of executing a fair task and more fit for gratuitous relief than for labour; meanwhile the fields would be deserted and the crops lost, since it would then be impossible for the cultivators to return to their holdings, as they did with such conspicuous alacrity in 1897, in order to take advantage of the changes of the seasons, opportunities often fleeting and uncertain, but of inestimable value to the agriculturist. In a word, I believe that if the distance test be insisted on, Government would bring about a result exactly contrary to that which is its avowed object to compass, and that, instead of driving scarcity away and maintaining intact the spirit and status of the people, it would demoralise and disintegrate the whole country side, and convert scarcity into famine."

The rise and fall of the total numbers in receipt of all kinds of Government relief have already been briefly referred to.

Fluctuations of numbers upon relief works and comparison with the famine of 1873-74.

The following statement shows the daily average numbers month by month upon relief works only as compared with the figures of 1873-74:—

Month.	1873-74.	1896-97.
November	5,281	3,893
December	49,051	21,990
January	113,224	157,235
February	284,690	254,531
March	674,074	264,670
April	1,295,816	309,365
May	1,694,142	376,295
June	1,198,908	360,698
July	632,259	218,181
August	426,077	109,402
September	242,079	35,426
October	...	8,672

In both famines alike the average daily numbers were highest in May, or just before the breaking of the monsoon, but the maximum numbers in the recent famine were not quite one quarter of those of 1873-74. Another point which the figures clearly illustrate was the unusual rush to the works during the recent famine in January. The numbers in that month were more than seven times as large as the numbers in December, while in 1873-74 the corresponding increase was not threefold; after January the figures during 1897 rose and fell in a much more even fashion than in 1874. Considering the figures broadly for the affected area as a whole and ignoring local variations, caused by special influences, the effects of the seasons are clearly manifest. In January the great rise is attributable partly to the cessation of field employment,—the rice-cutting was mostly over, and there was little to be done to the *rabi*; partly to the fact that arrangements had been made for opening of new works as distress manifested itself. In February similar causes were at work, and there was again a large rise. In March the cutting of the *rabi* harvest caused a check in the rate of increase, though deepening distress prevented the figures from falling. When the cold-weather crops were off the ground there

was a steady rise in numbers throughout April and May. The turning point came in June, but the decline was slight, as a copious fall of rain was delayed till the end of the month. After June, each month saw a continuous and rapid dwindling in the numbers, and as field work offered itself, and the new crops came into the market, there was no difficulty experienced in getting the people to leave the works and resume their ordinary employment.

The proportion of women and children to men among the total number of labourers on the relief works is of importance in considering the relations between diggers and carriers. It has been already mentioned how the

Percentage of women and children on the works to total workers.

normal preponderance of women and children over men in the North-Western Provinces led to the system there adopted of tasking the digger only, resulting in the carriers being often left with but a nominal task to perform. In these Provinces the importance of exacting a task from the carrier as well as the digger was borne in mind from the first, and Mr. Higham, C.I.E., after the enquiries ordered by the Government of India, has given it as his opinion that—

“there is no doubt that the carriers are much more heavily tasked here than elsewhere, and that they have to work as hard as the diggers, and it cannot be said that the carriers being taken as they come, do only a nominal task.”

The following statement shows the proportion between men, women, and children on the works during the whole period of operations:—

	Shahabad.	Saran.	Chauran.	Muzaffarpur.	Darbhanga.	Bhagalpur.	Southal ganai.	Hazribagh.	Palawan.	Manbhum.	Bankura.	Murshidabad.	Nadia.	Khulna.	Puri.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Percentage of women to total workers.	41'87	30'8	37'31	33'14	43'9	42'49	33'4	37'89	37'6	35'42	33'67	7'8	14'7	10'5	4'3
Percentage of children to total workers.	21'36	31'9	21'07	15'63	11'5	13'79	22'1	21'14	14'32	9'94	5'62	7'5	11'4	7'8	19'3

The only districts in which some inconvenience was felt in forming pit gangs from the excess of women and children over males were Shahabad and Saran. From both these districts a considerable temporary emigration of the male members of families goes on for the crop-cutting in Eastern Bengal and elsewhere, and it was their women-folk and children who were left behind who crowded upon the works. The percentages varied as the famine went on, showing a natural tendency to rise as distress deepened, and latterly when at the breaking of the rains, the men went off to field-work; on the other hand, piece-work had a tendency to increase the proportion of men. In Khulna, and Murshidabad, women would not work on the relief works.

The final classification of labourers into B and D classes has already been referred to, but in addition there remained those who, although attendant on the works, were shown in the returns as employed on a daily wage without the exaction of any task. They were of two descriptions,—the old and infirm, physically incapable of performing any allotted earthwork task, and put on to odd jobs, such as breaking up clods, dibbling in grass, and generally dressing off the work, which required no skill and little exertion; they formed an intermediate class between the D class labourers on the one hand and those in receipt of gratuitous relief on the other, and were as a rule remunerated with the minimum wage. In dressing and turfing, however, a task in superficial feet was usually insisted on; but, as the work so done could not be shown in cubic feet, it did not appear in the returns as task work. Secondly, those who were capable of doing work requiring more intelligence than the ordinary unskilled labour of digging and carrying, but which did not lend itself to the setting of a task, such as assisting to lay out tasks, building huts, mending tools, going on messages, carrying water, etc. Such workers usually received the full wage, and sometimes a little over. A careful scrutiny of the numbers of such labourers was at all times maintained, as the nature of their work lent itself to fraud upon Government, and whenever

Proportion of workers on wages irrespective of task to total workers.

it appeared that the proportion upon any work was becoming excessive, enquiries were immediately instituted. The following statement shows the percentage of such labourers in each affected district to the total number of workers during the whole period of operations:—

Shahabad	...	...	23.02	Palamau	...	...	4.43
Saran	...	...	26.4	Manbhum	...	...	15.87
Champaran	...	...	12.13	Bankura	...	...	4.01
Muzaffarpur	...	...	26.36	Murshidabad	...	...	4.2
Darbhanga	...	...	20.7	Nadia	...	...	13.4
Bhagalpur	...	...	10.19	Khulna	...	...	21.4
Sonthal Parganas	...	...	7.7	Puri	...	...	18.0
Hazaribagh	...	...	2.39				

The cases of such districts as the Sonthal Parganas, Hazaribagh, Palamau, Bankura, and Murshidabad, in which the numbers on task-works were small, are exceptional. Certain general considerations appertain to the figures as a whole in regarding the proportion they bear to the remaining tasked workers, which in an ideal system of famine relief should obviously be as small as possible. In the first place, from about April all those who received the Sunday wage without work were classified under this head, or, in other words, a number equivalent to one-sixth of the number of task-workers. Further, on the Jubilee holidays all who were on relief works received wages without the performance of any task, and were shown in this class; the same was the case after the breaking of the rains on days when work was impossible. In some districts, too, at the beginning of operations carriers were classed under this head. But the period when the proportion of those on wages without task rose considerably with relation to the tasked workers was when the closing and finishing off of works commenced. The diggers and carriers then decreased daily, while the petty staff recruited from famine labour had still to be maintained, and the gangs to finish off and dress up the work had, if anything, to be increased. Another circumstance which affected the numbers from whom no task was taken was the proportion of tank work to road work, there being more dressing to be done on the latter than the former. On a consideration of these and similar circumstances, the Commissioner of Patna is of opinion that the real number from whom no task was exacted may be put well below 10 per cent. of the total number on the works.

No systematic enquiry into the castes which came to the relief works was possible amid the more urgent demands of the other details of famine work upon the time of the local officers. Some local enquiries were, however, made. In Saran it was found that the majority upon the registers were Chamars, Noonias, Jolahas, Dusadhs, Binds, and Ahars; in other words, the low labouring castes. The higher castes of Brahmans and Rajputs were few. On the other hand, in Champaran it was found that a considerable number of persons of the better castes attended, and also of petty cultivators as distinguished from the landless labourers. In North Bhagalpur, again, the peculiar caste characteristics of which have already been referred to, the landless labouring class predominated. In Hazaribagh the Collector found that about 10 per cent. of the workers had never before worked for wages. In Bankura the majority of the workers were professional labourers and labourers well accustomed to do earthwork. In Khulna it was found that petty cultivators attended the works, and that the Pode population in many places held aloof. The Commissioner of Patna, with his advantages of inspection of many works in different districts, is of opinion that about 75 per cent. of the relief workers were drawn from the class of landless labourers, some 15 per cent. from petty cultivators, with about 5 per cent. artisans and 5 per cent. high caste men. Probably this is as near an approximation to the facts as can be arrived at.

Such being the arrangements in force for the efficient management of the relief works and the proportions of the different classes upon them, it remains to be considered how far the works were practically successful in

Outturn and wages paid upon task-work.

obtaining a reasonable outturn for a moderate wage. The following statement for the workers upon task-work during the whole range of operations will show the daily outturn of work obtained, the cost rate per 1,000 cubic feet, and the wage paid, as reported by the local officers:—

Task work.

DISTRICT.	Total number of persons reckoned in terms of one day.	Average daily outturn of work per male unit.	Cost rate per 1,000 cubic feet.	AVERAGE DAILY WAGE.	
				Per head.	Per male unit.
1	2	3	4	5	6
PATNA DIVISION.	Shahabad ...	724,525	C. FT. 43·7	Rs. A. P. 2 4 2	A. P. 1 2½
	Saran ...	2,508,649	34·5	2 8 6	0 11
	Champan ...	14,483,077	24·54	3 10 7	1 1
	Muzaffarpur ...	5,491,436	60·	1 7 6	1 1
	Darbhangā ...	17,373,476	35·3	2 10 3	1 2·5
	Whole Division	40,581,163	35 1	2 9 7	1 1
BHAGALPUR DIVISION.	Bhagalpur ...	1,064,744	36	2 5 6	1 1
	Sonthal Parganas	174,874	54	1 13 11	1 3
	Whole Division	1,239,618	38·2	2 4 0	1 1·8
BURDWAN DIVISION.	Bankura ...	54,409	61	1 12 10	1 5
PRESIDENCY DIVISION.	Nadia ...	2,501,204	46·1	2 11 6·5	1 8·9
	Murshidabad ...	218,640	66	1 8 5	1 5
	Khulna ...	152,764	54·03	2 2 2	1 10·5
	Whole Division	2,872,608	46·87	2 9 4	1 8·4
Puri ...	...	256,802	76	1 11 0	1 10

N.B.—There was no task-work in the Chota Nagpur Division.

So many different elements enter into the calculation that the comparison of inter-district results is apt to be misleading; the proportion among works undertaken of roads to tanks, with their long lift and heavy lead; the proportion of adult males among the workers; the quality of the soil, and as to cost, the different rates of wages in different districts, are all considerations which affect the results to a varying extent in different districts. All that need

be said generally is that the outturn per male unit was remarkably good; and that it showed a gradual tendency to increase and cost per 1,000 cubic feet to decrease, as the famine went on and the discipline upon works was perfected. The marginal figures for each month of the famine of the divisional daily average outturn per male unit in the Patna Division, in which by far the greater part of the task work was done, clearly indicate this progressive improvement. The remarks of

Mr. Higham, to whose enquiries reference has already been made, may be quoted as independent testimony to the efforts which were concentrated in Bengal upon this important part of famine administration:—

“ The narrative reports afford evidence of the close attention paid by all officers to the tasking and outturn of work. I believe it may safely be said that in no other Province are the full tasks for a minimum wage so heavy or as fully worked up to as they

have been in Bihar. This is partly due to the high proportion of men to other workers and to the character of the works, which, as a rule, permit the employment of a high proportion of carriers, but a great deal is undoubtedly due to the vigilant attention paid to the daily outturn for each male unit. Nor can it be said that the task-workers receive a higher wage than elsewhere."

Comparison between the results of task-work and piece-work upon the works undertaken by the Public Works Department.

00. The following statement shows the relative cost rates of task and piece-work upon the works undertaken by the Public Works Department:—

TASK WORK.

Division or work.	Workers, male unit.	Outturn.	Average out-turn per male unit.	Total cost.	Rate per 1,000 cubic feet.	Average earnings per male unit.
1	2	3	4	5	6	7
		C. PT.	C. PT.	Rs.	Rs. A. P.	Rs. A. P.
Darbhanga ...	2,001,230	66,447,443	23.6	2,31,713	3 5 0	0 1 3
Machulisi ...	1,532,432	40,839,835	27.0	1,50,872	2 3 6	0 1 4
Musaffarpur ...	743,175	28,221,171	31.5	71,451	1 14 0	0 1 0
Champeran ...	1,073,255	61,940,238	57.0	1,40,936	2 13 4	0 1 6
Baran ...	249,04	6,330,559	25.2	28,702	4 0 0	0 1 10
Nadai† ...	1,448,410	56,633,170	39.2	1,67,667	2 15 2	0 1 11

‡ Includes all expenditure incurred upon the works.

PIECE-WORK.

		C. PT.	C. PT.	Rs.	Rs. A. P.	Rs. A. P.
Sakri-Jainagar Railway.	689,720	27,408,612	59	64,936	2 5 0	0 2 3
Baghmati Canal.	80,730	2,045,003	25	5,617	1 15 0	0 1 10
Bayana a Cut ...	46,498	3,324,006	65	7,539	2 5 0	0 2 3
Tribeni Canal ...	804,120	56,744,777	65	1,47,428	2 10 2	0 2 3
Nadia District Works.†	69,911	153,193	22.05	13,565	2 7 8	0 3 3

* In the Baran and Nadia districts actual numbers are given, not male units.
† Only men were employed on piece-work in the Nadia district.

With the exception of the Chota Nagpur Division, where the work was practically wholly conducted as piece-work, and to the extent already indicated in the Bhagalpur, Burdwan, Presidency and Orissa Divisions, the system of piece-work upon large works was practically confined to the Patna Division. Piece work in that Division, except for a short time on some small works under the Civil Agency in the Samastipur subdivision of Darbhanga, was introduced upon

Champeran—
Tribeni Canal.
Bettish-Bagaha Railway.
Musaffarpur—
Bagmati Canal.
Raya Nala cutting.
Darbhanga—
Sakri-Jainagar Railway.

the marginally noted large works, all of which were in charge of the Public Works Department, and a comparison of the results obtained under piece-work and task work respectively by that Department with its advantages of a more highly trained supervising staff under both systems, gives therefore a fairer basis for comparison than by deductions from the smaller works under the civil agency, which were to some extent, as regards the Chota Nagpur Division, at least, subject to different local peculiarities. The system did not have the complete trial which might otherwise have been given had it been understood from the first that such a departure from the Famine Code would have been permitted, but the general weight of opinion, where the means of judging were best, is distinctly in its favour as opposed to task-work. In the Patna Division the opinion in favour of the system is almost unanimous. In the Bhagalpur Division the Collector of Bhagalpur was distinctly in its favour, and so to a less extent was the Deputy Commissioner, Sonthal Parganas. In the Chota Nagpur Division the peculiar local conditions rendered piece-work a necessity; the strong dislike of the aboriginal people to any form of regulated labour, and the means at hand in the existence of jungle produce of supplementing a partial diet, had task work been attempted, would have led to universal idling in the hopes of obtaining the minimum wage with which the people would have been quite satisfied. The Collector of Bankura;

strongly in favour of piece-work, and the only adverse opinions are expressed from the Presidency Division. The advantages of the system are various; the people understand it and prefer it; the necessity for large petty establishment is removed; the elaborate classifications of labour and of maximum, minimum and penal wages which lend themselves too readily to fraud on the part of the subordinate staff, are avoided; the relief-worker is able to support his dependants, and the numbers on gratuitous relief are to that extent diminished; and lastly, the work is cheaper and more efficient. That the average daily wage was higher under the piece-work system was expected, and in fact intended; the wage or task work is calculated to support the worker only, but one of the objects of piece-work is that by hard work the labourer will earn sufficient to support his dependants. The merits of the system are thus summarised by the Hon'ble Mr. Glass:—

"The Engineers engaged on works in the recent famine are unanimously of opinion that piece-work is the most suitable form of employment for able-bodied persons on famine works at all times. At the outset of a famine, when distress is not acute, piece-work is the most certain preventive against people flocking to the works who are not really in need of relief; and it has, besides, the advantage of putting a stop, in a great measure, to the fraudulent designs of muharrirs and other subordinate employees, who are only too ready to avail themselves of the opportunities afforded by the task-work system for embezzlement. It is well known to all who have had experience of relief works in this and previous famines that the class referred to are corrupt in the extreme, and that no inconsiderable portion of the expenditure finds its way into their pockets. At the commencement of a famine it is quite impossible to prevent speculation when relief is afforded on the task-work system. Everything is more or less in a chaotic state, and until order has been brought about, the opportunities for embezzling are numerous. Even when order has been introduced, the system is such that dishonest persons find no difficulty in attaining their ends. It is the general opinion of Public Works Officers engaged in the recent famine that it is not possible to prevent swindling altogether when work is carried out on the task system. The dishonesty of the underlings is not the only objection to it. It involves the maintenance of a large and expensive establishment for the purposes of mustering the people, making and checking measurements, and the keeping of accounts. It also involves considerable interference with the labourers which they do not like, and much of their time is wasted (from the labourers' point of view) in forming the gangs, calling the muster-rolls, and setting the people to work. All these disadvantages practically disappear under the piece-work system."

On the other hand, that the system has disadvantages was fully recognised. It is exceedingly difficult to determine a rate which will allow the inexperienced and weakly labourer to live and at the same time not allow the professional labourer to make a profit on the work, although a system of piece-work on different rates for different classes can be adopted, as was actually shown to be practicable, or piece-work can be supplemented by a system of petty task-work for the weakly and their dependants. A second disadvantage of the system is that it is very difficult to prevent the petty contractor creeping in; the mate of a gang easily degenerates into a contractor's servant, although this difficulty too was met by making the gangs smaller. Further, there is a tendency for professional labour to drive others out of their gangs. That women and children on a piece-work will be in less proportion was anticipated, and the actual results exemplify this most clearly. Finally, in so far as it is calculated that the wage will support a labourer and his dependants, in the case of any worker unencumbered by dependants the balance over and above what is required for his personal maintenance is so much clear profit to him and unnecessary expense to the State.

The rates of outturn obtained by the Public Works Department do not call for detailed comment. In Darbhanga and Madhubani the higher rates under task-work were due to the preponderance in these divisions of work on tanks with their long lead and excessive lift; in Saran the figures of cost include all expenditure upon works, and not only that upon wages; the mean rate if adjusted would probably be less than Rs. 3-8 per 1,000 cubic feet. Under the system of piece-work the outturn per male unit on the different works was singularly uniform, the high figure attained in Nadia being due to the fact that nearly all the labourers were able-bodied men, and that there were practically no women or children. Allowing for reservations on account of varying lift and lead, the outturn is both higher and the consequent rate per 1,000 cubic feet uniformly lower than under the task-work system of the Code, the only exception being the district of Muzaffarpur, where the rates for task-work were throughout exceptionally low.

In the course of the famine a complaint was made with especial reference to the Moghalsarai-Gaya Railway, in the district of Shahabad, that the famine works were attracting labour from it to the more profitable employment on Government relief. The line ran through an affected area; and had fair rates been offered, there would have been every reason to suppose a supply of labour would be forthcoming, but on enquiry it was found that the Company had started with a rate of Re. 1-8 per 1,000 cubic feet to contractors, including dressing. The rates compared to normal rates were low at any time; with grain selling at the price it was, they were prohibitive, and insufficient to afford a bare subsistence to the workers. The Company had to raise its rates to Re. 1-12, Rs. 2, and ultimately to Rs. 2-8, at which point labour was secured. As soon as a reasonable rate was offered, Government works in the neighbourhood were closed, so that any possibility of competition might be obviated.

CHAPTER VII.

GRATUITOUS RELIEF.

The classes of persons who are considered entitled to the receipt of relief gratuitously are, broadly speaking, those from whom it is impossible to exact any form of task in return, but the provisions of the Famine Code define them more precisely, and the following classes are included, provided that they have no relatives able, and by the custom of the country bound, to support them:—

- (a) Idiots and lunatics.
- (b) Cripples.
- (c) The blind.
- (d) All who from age or physical weakness are incapable of earning their living.
- (e) All persons whose attendance on the sick or on children in their own homes is absolutely necessary.
- (f) Respectable people who are reduced to starvation.

In the distribution of gratuitous relief several different methods of procedure were adopted. In this, as in other matters, Sir Alexander Mackenzie while insisting everywhere on the observance of the fundamental principle of saving life at the least possible cost to the State, thought it wise to leave a large discretion in details to local officers, knowing that no one Procrustean rule or method would be found suitable to the infinite variety of condition, habits, customs and prejudices prevailing in provinces of the vast extent of Bengal, Bihar and Orissa. In some districts all the methods described below were in vogue at one time or another of the famine; in others, some only were adopted, local conditions being the predetermining cause in each case. The different means of distribution may be stated as follows:—

- (a) Village relief by money or grain doles.
- (b) Relief at kitchens.
- (c) Relief at poor-houses.
- (d) Relief of dependants on works.

In the Patna Division the first step taken towards giving gratuitous relief was the allotment of small advances to police officers with instructions to relieve all urgent cases. The measure was temporary only, anticipating the general organisation of relief establishment in the district. As charges and circles were mapped out and manned in the manner already described, the circle officers were provided with maps and details of the villages under them, with which their first duty was to make themselves acquainted. In the meantime lists of persons who were considered to be suitable recipients of gratuitous relief had been collected through the police, the village panchayats and chaukidars. These lists were made over to the circle officers, with orders to visit every village, muster the people named on the list, and by inspection and enquiry satisfy themselves that they were fit to be placed in receipt of such relief. The check by the circle officer was as far as possible repeated by the Charge Superintendent, and the lists were subject to constant scrutiny by every superior officer who had occasion to visit the locality. The lists once prepared, days and centres of distribution were fixed, at which it was the duty of the circle officer to attend and to personally supervise the giving of the doles of grain or money, but usually grain. These central distributions in their turn were subject to constant supervision by the superior officers. The system was primarily based on minute house-to-house enquiry in the villages, the work of the actual person enquiring being subjected to constant check by higher paid officers. The importance of this check was realised from the beginning, and as soon as the organisation of relief works was sufficiently advanced to free Charge Superintendents from more pressing duties, it was the subject of special and unremitting attention. Notably in Champaran and Muzaffarpur, but

History of the procedure adopted in different districts.

generally in all the districts of North Bihar, the greatest assistance in checking the lists was derived from the volunteer supervision of the indigo planters, whose intimate acquaintance with the circumstances of the people in the neighbourhood of their factories, made their services especially valuable. Although the greater part of the gratuitous relief given was in the form of grain and money doles to the people in their villages, poor-houses were started at an early stage, but for reasons which will be stated more in detail later, they were never largely attended. Relief in kitchens, originally intended primarily for travellers and wanderers, also played an important part in the later stages of the famine, especially in the maintenance of children. Dependants, meaning the dependants of those who were working on relief works, but unable to work themselves, were relieved by money doles on the works. This form of relief was never encouraged and obtained most on works under the Public Works Department. Relief to artisans was not given in the Patna Division. In the Bhagalpur Division lists of recipients of gratuitous relief were drawn up and weekly distributions of grain were started in the Bhagalpur district on a similar system to the village relief of the Patna Division. In the Sonthal Parganas lists were framed by local Committees and checked by the Charge Superintendents after which tickets were distributed, entitling the holders to receive so much grain from a shopkeeper. The latter on producing the tickets as vouchers was paid the price of the grain. In the Chota Nagpur Division gratuitous relief in Hazaribagh was given practically entirely in kitchens, and to urgent cases of travellers along the Grand Trunk Road, through the police. In Lohardaga what relief was given was distributed for the greater part in kitchens, and to a small extent also by doles. In Palamau the large area of scattered distress caused a different system to be evolved. Committees were formed at each thana and outpost, usually with the local zamindar as Chairman, who undertook a house-to-house enquiry in the villages under them and the preparation of lists of suitable recipients. A panchayet was then appointed in each village, who undertook the relief of the persons named in the list by a system of small permanent advances. *Parda-nashin* women and artisans were relieved from the charitable fund. Similar local Committees were also formed in Manbhum, but cooked food was also given in kitchens, and weavers were also relieved by paying them for cloth woven or by a system of advances. In Bankura lists were prepared through the agency of police and panchayets, subject to check by a supervising officer, and weekly distributions held, which were presided over by a reliable local agent, either a Government servant or a volunteer. Kitchens were also opened at a late stage. In the Presidency Division no gratuitous relief was given in the Murshidabad district from Government funds. In Nadia the village system similar to that adopted in Bihar was followed, supplemented by kitchens towards the end of the famine. In Khulna the village system was adopted, together with the establishment of poor-houses, which were more successful here than elsewhere. Relief was also given to weavers. In Puri the village system was adopted.

The following statement shows the average daily numbers in receipt of gratuitous relief of all kinds during the whole period of the famine operations and the corresponding figures of 1873-74 :—

Average daily numbers on gratuitous relief.

Month.	1873-74.	1896-97.
November	...	17
December	...	5,994
January	378	32,199
February	3,708	113,130
March	24,003	207,111
April	168,245	297,229
May	305,052	414,324
June	508,770	459,000
July	685,595	425,186
August	582,361	316,424
September	318,151	108,148
October	23,272	5,578
November	4,118	...

During the famine of 1873-74 gratuitous relief was not started till January, nor was it fully organised until April, but in the recent famine the organisation, which had been started in December, had already reached considerable dimensions in February. On the other hand operations during the recent famine closed a month earlier than in 1873-74. It is to be observed that while the maximum numbers on relief works in 1874 were more than four times as great as in 1896-97, the numbers in receipt of gratuitous relief in the latter year approximated more closely to the figures of the former famine. The explanation is not far to seek. While gradually deepening distress has the result of increasing the numbers alike upon relief works and gratuitous relief, the circumstances affecting the course of the two systems of relief are not in all respects identical. The average daily numbers upon gratuitous relief were first in excess of those upon works in May, and thenceforth, excluding the month of October, when operations were being wound up, remained so practically till the end of the famine; again while the daily average upon relief works reached its zenith in May, the numbers upon gratuitous relief did not touch their highest point until June, succeeded by a very small falling off in July. The classes who are entitled to the gratuitous relief consisting of the lame, blind, halt, the sick, the aged, and of professional beggars, constitute a more or less fixed percentage of the population who even in ordinary times, are dependent upon the charity of their neighbours for subsistence. As the relief organisation was extended and the increasing pressure of distress caused the springs of private charity to dry up, this portion of the population was bound gradually to drift on to the Government lists. Once there, they were obliged to remain until favourable prospects and cheaper prices opened out other sources of charity. It is for this reason that while upon relief works, the breaking of the monsoon caused at once a falling off in the numbers of the able-bodied who could find employment in the fields, the numbers on gratuitous relief did not decrease to any marked extent until August, and even in September were considerable.

During the course of the famine doubts were at one time felt by the Government of India, whether, in view of the numbers upon relief works compared with the numbers upon the gratuitous list, the latter form of relief was not being overdone. In reply it was submitted that there is no necessary connection between the numbers upon relief works and upon gratuitous relief, the former being more or less a fixed percentage of the population, and the latter varying with the strictness with which the labour test was enforced, the possibility of obtaining employment outside of the Government relief works, and the general staying power of the population of the distressed areas; and even assuming that there were such connection, the relative proportions in the districts of Bengal did not differ materially from those in other districts in other parts of India. The percentage of the population upon gratuitous relief did not exceed what from *à priori* considerations of the conditions of the affected tracts might reasonably be estimated as probable, being about the same as the percentage of the population in poor-houses in England. Apart, moreover, from the constant attention and supervision which had been directed from the commencement by the local officers from the Commissioners downwards, to the checking of the lists and the removal of names improperly placed upon them, Sir Alexander Mackenzie and the Hon'ble Mr. C. C. Stevens, when Officiating Lieutenant-Governor, had both satisfied themselves, by personal inspection, that the principles of relief laid down in the Famine Code had neither been departed from in theory nor exceeded in practice. Independent testimony to the same effect was borne by gentlemen unconnected with the provincial administration. Mr. James, writing of Champaran, remarked:—

'We drove to see a relief work . . . and then watched the distribution of gratuitous relief. All present were obviously suitable objects of relief, being composed principally of helpless men, poor women, with a number of small children and weakly men and boys.'

Again, Mr. Higham reported after his visit to these provinces:—

"During my tour, therefore, I endeavoured to see as many as possible of the people on village relief . . . I can . . . very confidently assert that, among all those inspected by me, there was not an individual who was fit to be sent to the works, or to be given only the most nominal task."

The Government of India ultimately expressed themselves fully satisfied with the administration of this, as well as of other branches of the relief administration in Bengal.

Percentage to population of the affected area of the highest numbers reached upon gratuitous relief.

The following statement shows the highest number on gratuitous relief reached on any day in each affected district, and the proportion borne to the population of the affected area :—

Division.					1896-97.	
					Highest number reached.	Percentage of highest number of population of affected area.
1					2	3
Shahabad	...	...	...	...	24,280	6·35
Saran	...	...	...	...	59,809	2·65
Champaran	...	...	...	...	91,290	4·91
Muzaffarpur	...	...	...	...	77,102	3·34
Darbhanga	...	...	...	...	109,619	4·53
Total Patna Division					362,099	3·93
Bhagalpur	...	...	...	...	6,216	1·91
Sonthal Parganas	...	...	...	...	6,372	1·69
Total Bhagalpur Division					12,588	1·79
Hazaribagh	...	...	...	...	5,823	2·91
Palamau	...	...	...	...	2,488	·41
Manbhum	...	...	...	...	11,987	1·21
Total Chota Nagpur Division					20,297	1·13
Bankura	...	...	...	...	12,044	2·91
Nadia	...	...	...	...	83,093	13·27
Murshidabad	...	...	...	...	Nil	...
Khulna	...	...	...	...	11,013	3·99
Total Presidency Division					94,106	10·43
Puri	...	...	...	...	2,035	1·99
GRAND TOTAL					503,169	3·83

The highest percentage was reached in Nadia, where 13·27 of the population of a particular tract were at one time upon gratuitous relief, after which came Shahabad with 6·35 per cent. The highest aggregate number reached was in Darbhanga where, on the 26th June, 109,619 persons were upon the gratuitous relief lists. With regard to the district of Nadia, the excessive numbers being gratuitously relieved at once attracted the attention of Government, and it was feared that, owing to the insufficiency of the supervising establishment and to relaxation in the case of Muhammadan women, of the rule which required all able-bodied persons to work as a test of their being in distress, gratuitous relief at one time was being overdone. Additional officers were at once deputed, and the Officiating Lieutenant-Governor as already remarked, ordered a rigid scrutiny of the lists, after a personal visit to the district. The result of these measures and of the reaping of the early autumn rice, was that the numbers were largely reduced. The circumstances of Shahabad were exceptional: relief here was started somewhat later than elsewhere, and the people were, consequently in worse condition at the early stages of the famine; the temporary migration of the male members of families in this district has already been referred to, and their women and children were left to swell the list; further, the physical condition of the affected tract is at all times very low, and lameness and paralysis among the men (said to arise from eating the *khesari* grain) is very prevalent. In Darbhanga, the poverty and extraordinary density of the population are to be remembered in considering the numbers gratuitously relieved, and the results attained in the relief operations.

conducted by the Maharaja of Darbhanga, with all the facilities possessed by his subordinates for accurate knowledge of the circumstances of the persons relieved, showed by their similarity to the results on the Government lists, that relief was not being overdone.

Analyses of the descriptions of persons gratuitously relieved.

The following statement shows the proportions of men, women and children to the total number gratuitously relieved :—

DISTRICT.				PERCENTAGE TO TOTAL GRATUITOUSLY RELIEVED.		
				Of men.	Of women.	Of children.
1				2	3	4
PATNA DIVISION	Shahabad	...	...	19.19	46.53	34.28
	Saran	...	...	15.9	52.5	31.6
	Champanan	...	...	22.08	43.03	35.89
	Muzaffarpur	...	...	16.76	49.06	34.17
	Darbhangha	...	...	16.27	51.28	32.44
	Whole Division	...	...	17.93	48.47	33.59
BHAGALPUR DIVISION	Bhagalpur	...	...	17.66	54.97	27.37
	Sonthal Parganas	...	...	18.6	39.08	42.3
	Whole Division	...	...	18.10	47.65	34.25
CHOTA NAAGPUR DIVISION.	Hazaribagh	...	...	17	23	61
	Palamau	...	...	29	53	18
	Manbhum	...	...	18	39	43
	Whole Division	...	...	20.41	39.01	40.57
BURDWAN DIVISION	Bankura	...	...	20.18	41.65	35.16
PRESIDENCY DIVISION	Nadia	...	...	9.04	46.6	42.3
	Khulna	...	...	7.92	59.48	32.59
	Whole Division	...	...	8.87	50.29	40.83
ORISSA DIVISION	Puri	...	...	15.4	25.8	58.7

A noticeable point is the constancy of the proportions in different Divisions, with the exception of the Presidency Division, where the small proportion of men and large proportion of women gratuitously relieved was, as already remarked, due to the fact of women having been allowed to receive this form of relief instead of being forced on to relief works.

No regular statistics were generally collected of the particular causes which brought the various recipients on to the gratuitous relief lists, but in the Patna Division, an analysis was made in some typical circles. The enquiry was undertaken in July, when this description of relief was at its highest. The results were as follows:—

DISTRICT.	Number of circles.	Number of villages in the circle.	Persons in receipt of gratuitous relief on 1st July 1897.	CAUSES OF DISABILITY.						
				Lunatic or idiot.	Cripple.	Blind.	Deceit from age.	Parasitic women.	Orphans and destitutes.	Other causes.
1	2	3	4	5	6	7	8	9	10	11
Shahabad	4	113	6,819	42	6.76	3.29	40.97	10.23	10.50	23.21
Saran	14	646	8,636	134	3.17	4.07	33.15	7.63	6.95	44.65
Muzaffarpur	21	320	14,615	171	7.47	6.73	35.55	8.25	6.99	34.39
Darbhangha	21	766	30,303	63	3.25	3.66	33.64	6.44	3.83	50.26

The number shown under "other causes" was practically almost entirely made up of children; after them, the most numerous class were the aged, then *pardanashin* women, most of whom were made over ultimately to the care of the Charitable Relief Committees, and after them cripples and orphans. At the same time, information as to the caste of those on gratuitous relief was collected. It was found that the true cultivating castes of Kurmis and Koeris were not largely represented; the Brahmans and Rajputs forming the bulk of those relieved as *pardanashin* were not numerous, and practically the bulk of those relieved were of the lower labouring castes. Similar detailed enquiries were not made in other Divisions, but as far as information is available, it would appear that the majority of those gratuitously relieved by Government everywhere were of the low-caste indigent labourer and beggar classes.

The following statement shows the part which the different methods of offering gratuitous relief, already indicated, played in the general scheme:—

Table showing proportion of numbers on each kind of gratuitous relief to total gratuitously relieved.

DISTRICT.			Percentage of dependants to total gratuitously relieved.	Percentage of numbers relieved in <i>poor-houses</i> to total gratuitously relieved.	Percentage of numbers relieved in kitchens to total gratuitously relieved.	Percentage of those "otherwise relieved" to total gratuitously relieved.
1			2	3	4	5
Shahabad	...	...	3.69	1.92	2.24	92.12
Saran	...	...	1.71	0.33	4.32	93.62
Champanan	...	...	8.35	1.44	4.40	85.79
Muzaffarpur	...	...	3.25	0.67	15.81	80.25
Darbhanga	...	...	7.51	0.77	6.05	85.65
Whole Division	...	...	5.61	.92	7.03	86.43
Bhagalpur	...	...	10.72	Nil	Nil	89.27
Sonhal Parganas	...	...	3.01	Nil	2.28	94.71
Whole Division	...	...	7.16	Nil	1.05	91.78
Hazaribagh	...	...	Nil	.89	95.66	3.94
Palamau	...	...	Nil	Nil	Nil	100
Manbhum	...	...	Nil	Nil	24.83	75.17
Whole Division	...	...	Nil	.08	36.02	63.89
Bankura	...	...	.02	Nil	7.2	92.7
Nadia	...	...	9.56	.01	.40	90.02
Khulna	...	...	Nil	7.8	Nil	92.2
Whole Division	...	...	8.09	1.20	.34	90.35
Puri	...	...	17.3	Nil	Nil	82.6
GRAND TOTAL	...	...	5.72	.90	7.07	86.3

The heading "otherwise relieved" includes every variety of gratuitous relief except such as was given in poor-houses and kitchens and to dependants on works. The greater part of such relief consisted in the distribution of grain or money doles at the people's homes, but minor varieties are included, such as the payment of Re. 1 a month to chaukidars, who it was soon found were suffering from the inability of the villagers to pay their ordinary wages. Still, in every district except Hazaribagh, the village distribution was the backbone of the system. Relief to dependants of workers upon the works was kept within the smallest possible limits. It was found that such people were altogether out of place upon the works, where their presence merely hampered the organisation of the labour and the execution of the tasks. It was much easier in every way to relieve them in their villages, and in fact towards the end of February definite orders were issued to that effect, although a certain number of small children who could not be separated from their parents, together with a few old people to look after them, had throughout to be allowed to come on the works.

The proportion which dependants bore to the total number of relief-workers is shown below :—

Shahabad	...	16.29	Bhagalpur	...	5.1
Saran	...	4.7	Southal Parganas	...	4.5
Champaran	...	6.32	Bankura	...	.09
Muzaffarpur	...	4.81	Nalolia	...	24.5
Darbhanga	...	6.09	Puri	...	.9

The piece work system followed in the Chota Nagpur Division left no room for dependants. The high percentage in Nalolia is due to the fact that relief to children was at first granted in this way, but the system was stopped in July and kitchens opened for them instead. The large proportion of women and children to men in Shahabad would account for the figures in that district. Generally speaking, therefore, dependants formed less than 5 per cent. of the number on works.

The part played by poor-houses, with the exception of those in the Khulna district, was small. A poor house may fulfil two objects, either affording a test of the necessity for relief by submission to residence within it, or offering a means of punishing contumacious relief-workers. For the first purpose the test was considered too severe, or, as the Collector of Saran describes it, "the poor-house is primarily a test of prejudice and only secondarily a test of distress." It was found generally that residence in a poor-house was regarded with the utmost repugnance by even the lowest castes, and what inmates there were consisted mostly of wandering beggars and the destitute sick. As the Collector of Champaran points out, their chief use was as infirmaries. As a method of punishing unruly workers they failed in the absence of any power to enforce detention. The experience of Khulna was exceptional: the Collector did not find caste prejudices against residence in a poor-house so strong as elsewhere, and was able to a great extent to use the poor-house as a test of the real necessity for relief.

Kitchens as a method of relief were resorted to to a considerable extent, though chiefly towards the later stages of the famine. As soon as distress deepened, a considerable deterioration in the condition of the children was noticed, the inference being that their adult relatives were appropriating their doles. To meet this difficulty the distribution of food to children in kitchens was found of the greatest value. Towards the end of the famine, moreover, the acceptance of cooked food at a kitchen was found a suitable test in curailing operations. Relief to travellers, especially in such districts as were traversed by the Grand Trunk Road, was most conveniently offered in this form.

Roughly speaking, both poor-houses and kitchens were found to be more expensive forms of relief than doles either in villages or to dependants on works. To some extent attempts were made to get something from the persons gratuitously relieved in the form of light labour, such as spinning, weaving, string-making, etc., but as a whole it was found that the results barely justified the trouble taken.

CHAPTER VIII.

LOANS AND ADVANCES.

Loans under the modified rules of the Land Improvement Loans Act.

It has already been mentioned in the course of this narrative that one of the early measures adopted by this Government at the commencement of the famine was the modification of the rules under the Land Improvement Loans Act, so as to allow of loans on specially favourable terms within the areas officially declared as distressed, to land-owners and substantial raiyats for the excavation of tanks and other works of improvement, such as are required for relieving distress, and especially for improving the supply of water for drinking and irrigation. It was provided that the loans should be given free of interest and repayable in five years; and that if the work was completed to the satisfaction of the Collector, one-third of the principal would be subsequently remitted. It was hoped that advantage would be largely taken of these concessions, and that many labourers would thus obtain employment who otherwise would find their way to the Government works. The aggregate amount advanced in loans under these special rules was a little over three lakhs of rupees.

The advances in the Patna Division were taken advantage of very slightly. The proposal seemed to have been regarded with suspicion, and it was possibly feared that Government by paying portion of the cost of such works would have some claim to a right of property in the works or in the land on which they might be situated. In some instances the works were not carried out to the satisfaction of the local officers, and the experiment was not on the whole very successful. But when it is remembered that landholders in Bihar carried out from their private funds many works that afforded relief; that they paid up their land revenue in full during the year, and that their collections of rent must have been very short, it is not a matter for surprise that they did not embarrass themselves by largely resorting to Government for loans for carrying out works of improvement. No complete statistics are available of the numbers to whom labour was afforded in this way. In the Bhagalpur Division the people of North Bhagalpur seemed to require no stimulus to start petty works of the description which the rules were designed to encourage, and without practically any advantage being taken of these loans, small works were opened everywhere by private persons, and the Collector reports that of his personal knowledge over 200 private tanks were at one time being excavated or re-excavated in North Bhagalpur. In the Sonthal Parganas loans on the special terms were eagerly sought after, and the amounts advanced would have been larger were it not that the applicants were unable in many cases to offer adequate security. In the Chota Nagpur Division while the system did not work very well in Hazaribagh and Lohardaga, in Palamau and Manbhan the loans were eagerly taken up. In Palamau out of Rs. 43,125 advanced, it was estimated that work was done to the value of Rs. 40,227 and a daily average of 3,315 labourers employed for about four months. In Manbhan the daily average employed for about the same period was approximately 2,200, and the total amount advanced Rs. 42,610. In the districts of Nadia and Khulna in the Presidency Division the loans were eagerly applied for, and to a less extent in Murshidabad. In Khulna the works were carried on from January to July, and an average daily number of 1,200 employed; in Murshidabad the numbers averaged 1,500 daily between the middle of April and middle of June. Figures for Nadia are not available.

In addition to the sums advanced under the modified rules under the Land Improvement Loans Act, Rs. 1,07,135 during 1896-97, and Rs. 1,08,714 between April 1897 and November 1898 were distributed in the affected districts under the ordinary terms. The figures are those supplied by

Ordinary loans under the Land Improvement Loans Act.

the Accountant-General, Bengal. The works done seem to have been mostly of the nature of tanks, *bandhs*, and irrigation channels.

Under the Agriculturists' Loans Act, a total sum of Rs. 11,35,872 was advanced when the distressed area during 1896-97 and 1897-98. In view of the special circumstances of the year, the existing restrictions which limit the amounts advanced for such loans to Rs. 2 per acre of land held by the applicants was raised by Government in May to Rs. 3, and the restriction that loans should not be given to raiyats with holdings of 2 acres or less, was removed. Most of the advances were made on the joint and several security of the residents of a whole village, and were in the majority of cases given for the purchase of seed, though in the cold weather of 1896-97 money was also advanced for the encouragement of irrigation. In considering the total sums advanced, the large sum of over eight lakhs distributed as gifts and loans by the Charitable Relief Committees, should be remembered. Loans were not granted in Darbhanga, where the Collector thought that they were not required, and that the establishment necessary to enquire into the applications was not available; in this district also the Maharaja of Darbhanga advanced nearly six lakhs to his own tenants. Otherwise, with the exception of the Nadia district, they were freely distributed everywhere. The figures as to the number of persons who received these loans are very imperfect, but from such materials as are available it appears that the average amount advanced per family varied from Rs. 9-11-1 in Khulna to Rs. 5-10-5 in Champaran.

A bounty of Re. 1 on every kutchra well dug was sanctioned by Government in December 1896 with a view to encouraging the irrigation of the *rabi* crops, but the concession was not largely availed of. The proposal had particular reference to the Patna Division. In this Division the expenditure incurred in this way in 1896-97 was Rs. 6,793 in Muzaffarpur and Rs. 665 in Champaran, or a total of Rs. 7,458. In the greater part of Darbhanga there is a prejudice against irrigation from wells; in the Bhabhua subdivision of Shahabad the soil is not suitable for these wells, and in Saran the raiyats are ready enough to construct and irrigate from wells without special inducement. Many wells too were dug out of the sums advanced as ordinary agricultural loans.

The granting of loans for the importation of food-grains will be considered along with the general course of the traffic in food-grains in the Province, and the circumstances explained under which these loans were found necessary in Palamau, Hazaribagh, Nadia, and Puri. Elsewhere no stimulus to the import of food-grains was required.

The economic effect of the cultivation of opium, in the districts of the Patna Division, has already been referred to, and the payment of the opium advances made during the year 1897, although in no sense a special measure of relief, was obviously of the greatest benefit to the recipients during the prevailing distress, causing the circulation of a large sum of money in the affected districts, just when it was most required. The following amounts were advanced during the year:—

		Rs.
Shahabad	...	2,59,488
Saran	...	4,28,605
Champaran	...	3,17,708
Muzaffarpur	...	1,68,512
Gaya	...	9,37,847
Patna	...	2,96,867
Monghyr	...	2,95,757
Total	...	27,04,779

In the matter of relief by loans there was almost as great a departure from the policy adopted in 1874 as in the matter of the importation of grain by Government. As has been already shown above, the amounts advanced during the recent famine in the affected districts were—

Comparison between amounts advanced on loan in the recent famine and in 1873-74.

	Rs.
Under the modified rules of Land Improvement Act	... 3,01,007
Under ordinary rules of ditto	... 2,15,849
Under Agriculturists' Loans Act	... 11,35,872
Total	... 16,52,728

In 1873-74, calculating the price of the grain advanced at $8\frac{1}{2}$ seers to the rupee, the cost rate given by the Famine Commissioners, the total sums advanced in the distressed districts amounted approximately to—

	Rs.
In grain	... 1,34,75,000
In cash	... 30,03,000
Total	... 1,64,78,000

or far more than the total expenditure under all heads on the famine in 1896-97.

CHAPTER IX.

EXPENDITURE AND ACCOUNTS.

At the outset of the famine the expenditure upon the relief works undertaken, was for a short time borne by the District Boards. As, however, it speedily became evident that the resources of the District Boards would fall far short of the requirements, and that the bulk of the expenditure would ultimately fall on Government, estimates were called for from the various Commissioners and submitted to the Government of India in February, though revised estimates were subsequently submitted in March. The estimates for 1897-98 were sanctioned by the Government of India, and general authority given as regards 1896-97 to spend whatever might be required on the recognised methods of relief. Allotments to the affected districts were made monthly on receipt of estimates of requirements. Within the districts themselves Charge Superintendents worked on a system of permanent advances, with smaller advances from them to their circle officers, the advances being recouped at intervals after submission of the necessary bills. Some confusion in the accounts was caused at first, until some necessary modifications of the account rules as contained in the Famine Code, were finally decided on, and a special officer of the Accounts Department was appointed to travel round to the affected districts, explaining the system. The Public Works Department opened a special branch accounts office at Muzaffarpur, which was found of great use. The forms of accounts in use in the Public Works Department differed somewhat from those in use in the civil works, a circumstance which gave rise to some confusion and delay when works were to be transferred from one to the other, and has subsequently caused some difficulty in the classification of accounts on a uniform basis.

No special arrangements were found necessary for the supply of coin on the relief works. Copper coin was obtained on indent from Calcutta and sent out under police guard to the different works. The police force had to be strengthened in most districts for the purpose, but no case occurred of *loot* of coin *en route*. The only additional treasury opened was at Jhanjharpur in the Darbhanga district.

A detailed statement giving figures of expenditure is included in the appendices. It is necessary to give here a brief summary only of the noticeable points. The net result of the relief operations from first to last, reducing the persons relieved to terms of one day, shows that in the 15 affected districts 61,018,611 people were relieved for one day on works and 70,783,120 gratuitously, or a total of 131,801,731, while in districts in which distress was apprehended and test works opened, although famine was never officially declared to exist, relief on works was given to 277,239 people and gratuitously to 284,963. For the Province, therefore, as a whole, 61,295,850 persons attended the relief works, and 71,068,083 persons the gratuitous distributions, or a total of 132,363,933 in terms of one day. The total expenditure on relief works exclusive of expenditure in the nature of bounties and advances, amounted to Rs. 1,08,03,758, of which Rs. 4,78,235 was met from the funds of the District Boards, and Rs. 1,03,25,523 from the general revenues of Government. The expenditure may be classified under the following main heads:—

					Rs.
Wages of workers and contingencies	...	...	...	...	62,99,245
Gratuitous relief	...	...	...	...	32,00,287
Establishment	...	...	...	...	8,85,446
Tools and plant	...	...	...	...	4,09,785
Compensation for land, trees and crops	...	...	...	...	8,995
Total	...	...	...	...	108,03,758

The average daily cost per head of expenditure on the wages of workers excluding contingences amounted to 1 anna 4·9 pies per diem, and the average daily gratuitous dole to 8·6 pies per head; while the total daily cost per person relieved exclusive only of the compensation paid for land and crops, amounted to 1 anna 3 pies. The Lieutenant-Governor considers that the cost per head per day was very moderate, but he does not think that this should be regarded in itself and without regard to other considerations as a crucial test of efficiency in the administration of famine relief, for it is manifest if all or a majority of labourers failed to perform the proscribed tasks and were put on the penal wage, that the cost per head would be reduced below what was intended or desired. Inclusive of the bounties paid on grain and the cost of grain imported by Government, bounties paid to encourage the excavation of *kutchas* wells, and advances to grain importers and under the modified rules of the Land Improvement Act, most of which will be recoverable, the grand total of expenditure amounted to Rs. 1,12,52,005, or, in other words, to one crore and twelve lakhs. The accounts are still subject to minor adjustments by the local officers, and contributions by District Boards may possibly be slightly increased, but for all practical intents and purposes the figures may be taken as correct.

In the estimates sanctioned by the Government of India there was no special provision for compensation for land, bounties on grain imported, and the cost of Government grain, and the expenditure under these heads was met from general savings. The following statement shows the actual expenditure as compared with the estimates sanctioned by the Government of India for 1897-98, plus the actual expenditure during 1896-97 for which the actual, and not the estimated expenditure, was sanctioned by the Supreme Government:—

	Estimate.	Actual.	Saving.
	Rs.	Rs.	Rs.
Relief works and gratuitous relief, salaries and establishment ...	1,12,93,093	1,09,61,981	+ 3,31,112
Advances under the modified rules of the Land Improvement Act ...	11,92,522	2,82,566	+ 9,09,956
Bounties for wells ...	4,467	7,458	— 2,991
Total ...	1,24,90,082	1,12,52,005	+ 12,38,077

Under the main head of the relief operations therefore the estimate was singularly accurate; the circumstances which influenced the expenditure under the remaining two heads are set forth in another part of this narrative.

For the estimate of the numbers likely to require relief of any description, the only complete data upon which some forecast could be founded were for the Patna Division, and the subsequent results showed that the forecasts of numbers in North Bihar and Shahabad submitted to the Government of India in February were as nearly correct as could be expected. The estimates for Bihar were based on the assumption that 120 millions would have to be relieved for one day. The actuals were one hundred and ten millions.

The nett expenditure by Government in the famine of 1873-74, as given in the report of the Famine Commissioners, was Rs. 6,61,00,000. The difference of expenditure, therefore, on the two famines has been nearly five and-a-half crores.

Comparison with the expenditure during 1873-74.

CHAPTER X.

PRIVATE RELIEF.

With regard to private relief, as distinguished from the larger operations of the Indian Charitable Relief Fund, and confining the term to the assistance given by the zamindars and leading inhabitants of the affected districts to their raiyats and dependants in whatever form it was offered, it would be unjust to make any general assertion unfavourable to any class in any of the distressed districts. It will be shown subsequently in the course of this narrative that the payment of land revenue and cesses was not seriously affected by the famine. Government found it necessary to give but few remissions of revenue, and the petty zamindar, hampered by difficulties in collection from his raiyats, must have been at times himself pressed to pay up the Government demand. All classes, too, rich and poor, felt the pressure of the abnormally high prices, and the general uncertainty and apprehension as to the future, raised to a certain extent a not unnatural disinclination to expenditure of money beyond what was absolutely unavoidable. With these reservations, it may be said generally of the Patna Division, apart from the notable exceptions to be mentioned hereafter, that the ordinary zamindars made no great show of relieving their tenants. The European planters, however, who are also large landholders, displayed moderation in the collection of their dues, and in many instances conducted small relief works at their own expense in the neighbourhood of their factories. The assistance which they rendered gratuitously in the supervision of Government relief was also most useful, and has already been acknowledged by the Lieutenant-Governor. But all other private efforts taken together in the Patna Division were surpassed by the princely benefactions of the Maharaja Bahadur of Darbhanga who undertook to give relief to all who were in need of it throughout his estates. The scheme of relief organised by the Maharaja in Darbhanga and Muzaffarpur, consisted in the offer of labour on works on a system of piece-work at rates somewhat above the normal, to compensate for the dearness of grain, and the giving of gratuitous relief on very much the same lines as Government, with this difference that the Raj enjoyed the advantage of a village staff already on the spot, who possessed a personal acquaintance with the needs of the villagers and over whom they had various means of control. The maximum number of works opened by the Raj was 80, consisting for the most part of tanks and embankments upon which employment was given to an aggregate number in terms of one day of 2,834,848 persons, to whom Rs. 2,45,538 was paid as wages. The total cost of gratuitous relief amounted to Rs. 1,22,789, and a total number of 2,943,702 souls, in terms of one day, were relieved. The Maharaja Bahadur also distributed nearly 6 lakhs in advances. Government has already signified its high appreciation of this splendid liberality. The Court of Wards on behalf of the Hatwa Raj in the Saran district gave relief by works, grain advances, and gratuitous doles in kitchens and poor-houses. In all 28 works were opened, employing 789,236 people in terms of one day and involving an expenditure of Rs. 44,915 in wages, while Rs. 10,778 was spent on gratuitous relief equivalent to a distribution to 240,226 persons for one day. Eighty-four thousand eight hundred and thirty-two maunds of grain were distributed in advances to 30,523 tenants in 1,039 villages, which were of the greatest assistance. The other large zamindari of North Bihar, the Bettiah Raj, which is also under the Court of Wards, was not in a position to incur any great expenditure on famine relief. However, it spent in all Rs. 15,253 in maintaining a kitchen, excavating some tanks, and other forms of relief.

In the Bhagalpur Division a high tribute is paid by the Collector to the spirit of liberality displayed by all classes on this as on previous occasions of scarcity. The most conspicuous examples of such liberality were afforded by the Maharaja Bahadur of Sonbursa, who spent Rs. 34,000 on tanks and embankments, giving employment to about 5,000 persons for two months, and also distributed Rs. 9,000 in gratuitous relief; Rai Ganpat Singh Bahadur and his brother, Babu Narpat Singh, who spent on doles and other forms of relief Rs. 41,691, and remitted rents to the amount of about Rs. 40,000; and the Raja

Bahadur of Banaili, who expended Rs. 14,911 on works which, while affording labour, were also of benefit to the estate. In this district as in Bihar the Maharaja Bahadur of Darbhanga gave all the required relief to his own tenantry.

In the Sonthal Parganas the zamindars as a whole appear to have done a good deal in assisting their tenants, and Mr. Grant, Raja Ram Ranjan Chakravarty Bahadur of Hetampur, and Rani Kesobati Kumari of Hundwai and Rani Makhan Kumari of the Lachmipur estate are deserving of special mention. The many missionary agencies both here and in the Chota Nagpur Division rendered willing and valuable assistance to Government, and were strenuous in their efforts on relief. In the Chota Nagpur Division the zamindars of Hazaribagh and Lohardaga rendered but little assistance to their raiyats. The relations between landlord and tenant in this Division are in many instances strained, and the zamindars as a rule do not appear to have acted during the period of distress with much generosity. Palamau furnished a pleasing exception; the district is less advanced than others owing to its general remoteness, and the zamindars, many of whom retain their old ancestral properties, have always maintained a cordial sympathy with their raiyats, which is the more to their credit, as few of them are men of large means. The Deputy Commissioner mentions eight gentlemen who between them spent Rs. 47,855, and relieved on an average about 2,085 people daily for some five and a half months. Foremost among them were Raja Thakurai Bhagwat Dayal Singh of Chainpur and Rai Thakurai Gobind Prasad Singh Bahadur of Ranka. In Manbhum the zamindars are as a class too impoverished to do much in the way of relief. In Bankura there are no wealthy zamindars; and although a few came forward to assist their tenants, no one was able to do anything on a large scale. In the Presidency Division the landlords of Nadia did little to help their raiyats. In Murshidabad there are many liberal and public-spirited zamindars who came forward to assist, notably the late Maharani Surnomoyee and the Nawab Bahadur of Murshidabad. The Court of Wards estate of Cossimbazar spent some Rs. 30,000 in excavation of tanks, affording employment to from 1,000 to 1,200 persons daily, besides advancing Rs. 4,000 in loans. In Khulna the land-owners did not as a body show any special leniency to their raiyats, but the Hon'ble Justice Chandra Madhub Ghose of the Calcutta High Court both gave gratuitous relief and undertook relief works on his estate, and Rai Hari Charan Chaudri of Nakipur gave great help to his tenants by advances.

CHAPTER XI.

RELIEF FROM THE INDIAN FAMINE CHARITABLE RELIEF FUND.

As soon as it became apparent that the Province was face to face with famine, the organisation of private charitable relief, as distinct from relief from Government funds, was considered by the Lieutenant-Governor and actually taken in hand by some local officers in anticipation of the expression of the views and wishes of the Supreme Government on the subject. A nucleus of a Provincial Charitable Relief Fund existed in the balance of Rs. 35,334, which was in hand from the Bengal Distress Relief Committee—a Committee which had been organised by Sir Stuart Bayley's Government—and grants from this fund were supplemented by subscriptions locally collected. Distribution through local Committees on varying systems, according to local requirements, was started in the districts of the Patna Division with the exception of Muzaffarpur and Champaran; in Nadia, Jessore, and Khulna in the Presidency Division; in Rajshahi and Bogra, Hazaribagh and to a very small extent in the Sonthal Parganas.

The inauguration in India of the Indian Famine Charitable Relief Fund at a meeting held in Calcutta on the 14th January 1897, and presided over by His Excellency the Viceroy, was speedily followed by the formation of a Provincial Committee for Bengal, acting under the direction of the Central Executive Committee. The Provincial Executive Committee, which, as originally formed, included 32 members, representative of all sections of the community, under the Chairmanship of the Hon'ble Mr. C. C. Stevens, C.S.I., first met on the 28th January, and under its instructions active steps were taken in all districts to organise local machinery for the distribution of charitable relief.

The Committees formed provisionally at the outset of the famine were merged in the District Relief Committees formed under the Charitable Relief Fund; new Committees were formed elsewhere, and eventually a Committee was formed in every district of the Province. The District Magistrate or Judge was usually Chairman, but in one or two instances the post was filled by non-official gentlemen. The details of organisation varied, but ordinarily, subordinate to each District Committee, were formed local Sub-Committees for subdivisions or municipalities, and in the most distressed areas for thanas. Most of the local men of influence found a seat upon these Committees, members of which were drawn from all classes and professions. The organisation for charitable relief was not confined to the fifteen districts officially recognised by Government as distressed. To confine it to those districts was impossible. Every district in the Province was affected by the high range of prices, and almost every district contained areas where the crops had failed in whole or in part, and where "distress which just falls short of absolute destitution prevailed." In all these districts there was ample and legitimate scope for the operations of the Fund, and eventually in every district, with the exceptions of Hooghly, Darjeeling, Backergunge, and Balasore, some expenditure was incurred on relief, especially of the respectable poor. The actual disbursement of the money and giving of relief were entrusted to the District Committees. The duties of the Provincial Committee were confined to the distribution of funds between the various districts and the general supervision of District Committees; the collection and examination of periodical returns of expenditure and of persons relieved, the compilation of such returns for the Province, and the general settlement in communication with the Central Committee of the principles of the administration of charitable relief. In the town of Calcutta, however, relief was actually administered by the Provincial Committee, through the Commissioner of Police and one or two native gentlemen, and on a more extensive scale by the erection of sheds for the accommodation of destitute paupers in connection with the Campbell Hospital, and the provision of rations and comforts for a daily average of 200 persons.

The objects to which the Fund might be applied were settled by the Central Committee in concert with the Government of India, and may be summarised as follows:—

- (1) To supplement the subsistence ration provided by public funds by the addition of small comforts of food and clothing.
- (2) To provide for the maintenance of orphans.
- (3) To relieve the respectable poor, who will endure privation rather than apply for Government relief accompanied by official enquiry and the enforcement of a test.
- (4) On the subsidence of distress to restore sufferers to their original position, and to give them a new start in life.

The details of the administration of charitable relief funds will be found in the full and interesting report drawn up by the Provincial Committee. Here it will suffice to mention a few of the salient facts.

Receipts of the Provincial Committee.

The total amount received from the Central Committee amounted to Rs. 17,93,750, while Rs. 70,959 was "earmarked" for the Province. The total amount collected by the Provincial and District Committees amounted to Rs. 4,70,137 for expenditure in the Province and Rs. 30,976 for the benefit of other Provinces and the whole of India generally. Besides these amounts, it must be remembered that some of the largest subscriptions to the Indian Central Committee's Fund in Calcutta were given by the wealthy residents of Calcutta and Bengal for expenditure on India generally, which are not included in the sums mentioned. Sir Alexander Mackenzie is glad to be able now to say that the confidence which he expressed at a Darbar held at Belvedere on the 8th December 1896, that "Bengal will turn out to be inferior to no Province in the liberality of its rich men and the providence of its landholders," has been justified by subsequent events. The total of miscellaneous receipts amounted to Rs. 1,42,958, and the Provincial Committee therefore had at its disposal a total sum of Rs. 24,77,804.

The statement below exhibits the expenditure incurred by the different District Committees from the funds at their disposal, whether raised locally or received from the Provincial Committee or otherwise:—

Expenditure.

EXPENDITURE.

					Rs.	A.	P.
Object	I	...	...	...	2,03,511	3	8
"	II	...	...	...	13,155	5	2½
"	III	...	...	...	8,83,188	5	9½
"	IV	...	...	...	8,09,947	9	3½
Miscellaneous	...	...	...	...	24,594	7	5½
Total					19,34,396	15	4½

Including sums expended direct by the Provincial Committee, the total expenditure up to the 31st October 1897, subject to such final adjustment of the accounts as may be necessary, amounted to Rs. 19,46,480. As might have been expected, expenditure was largest in the four districts of North Bihar. Expenditure in districts other than the 15 districts officially declared distressed amounted to Rs. 3,99,507. When it was found in September that the monsoon rains of the year were all that could be desired, that owing to the success happily attending the Government operations the famine orphans to be maintained would be few, that the prospects of the coming crops were better than could have been expected, and that with a bumper harvest in view, private local charity could again be trusted to support the destitute poor, the Provincial Committee were enabled to refund to the Central Committee a sum of Rs. 2,75,000 for expenditure in provinces less favourably situated in these respects. The total outstanding balance on the 31st October 1897 with the Provincial and District Committees amounted to Rs. 2,56,324.

The details of distribution in different districts varied largely according to local conditions. Thus under Object I numbers of wanderers along the Grand Trunk Road were relieved in Gaya and Burdwan in kitchens; in Monghyr numbers were relieved

Distribution under Object I.

in a travellers' rest-house; elsewhere doles of food were made to the destitute, while little extra comforts and clothing were given to these classes and to those in receipt of Government relief in poor-houses and on relief works. Kitchens were also largely resorted to.

The maintenance of orphans absorbed only a small portion of the Fund in Bengal. The mortality of the year being in no appreciable degree above the normal rate, and the number of deaths directly due to famine being extremely small, the number of famine orphans was insignificant. In the whole Province 8,202 orphans are returned as having received relief under this heading, but of these the majority had lost their parents previously to the famine, while there are grounds for suspecting that in many instances children were put forward and classified as orphans whose parents were living and earning money on the relief works. Arrangements are being made for the future maintenance of the orphans who will be left after the dissolution of the Fund; their number is estimated at about 106 only in the whole of these Provinces.

More expenditure was incurred on the relief of the respectable poor than on any other object of the Fund. Distribution under Object III. In the Darbar to which reference has already been made, held at Belvedere on the 8th December 1896, Sir Alexander Mackenzie, addressing the large gathering of native gentlemen assembled on that occasion, said:—

"I specially commend to your attention the small people of respectable standing who cannot dig and are ashamed to beg, the poorer *bhadralog*. For them let the tact and goodwill of their wealthier fellow countrymen find suitable means of succour. The Government does not repudiate its own obligation to keep all classes of its subjects alive, but its methods are necessarily rough and indiscriminating, and into some classes of cases, it is hardly seemly for it to pry."

From the beginning therefore this form of relief was regarded as one of the primary and most beneficial objects of the Fund.

Relief under this heading took the form of gifts of clothing; provision of work, such as paddy-husking, cotton-spinning, cloth-weaving, etc., grain and money doles, the opening of cheap grain shops and other minor local variations of the above methods. In the administration of relief in the form of grain and money-doles, with a view to prevent the overlapping of Government and charitable relief, and to secure efficiency combined with economy, the Government agency of circle officers and Charge Superintendents was used to a considerable extent in the distressed districts. These officers already possessed village lists of persons deserving of relief and unable to go to the works, and it was the simplest and at the same time the safest arrangement to transfer the respectable poor, after scrutiny of the lists, to the books of the Charitable Fund.

The expenditure under heading IV, though large, bears, it is believed, a smaller proportion to the total expenditure than in other severely affected provinces. The reasons were twofold. In the first place, there was no large mortality among cattle in Bengal, and the need for the provision of funds to supply fresh cattle in the place of those dead or parted with under the stress of famine, was not so great as elsewhere. Secondly, there was some delay in the distribution of relief under this head owing to a difference of opinion that arose as to whether it should be given in the shape of loans or gifts. The greater part was eventually distributed as gifts, but in the Chota Nagpur Division and the districts of Khulna and Monghyr a certain amount was distributed as loans. Grants chiefly took the form of gifts for purchase of seed-grain and cattle, and a valedictory dole consisting of a small sum to all those in receipt of gratuitous relief when the relief operations were closed, the object being to give them a slight start till crops ripened. The enquiry into the numerous applications submitted for these grants was an arduous task, but here, again, the existing Government agency was utilised with good results. The local knowledge acquired by the circle officers in the course of the famine, and the enquiries already instituted on applications for Government loans under the Agriculturists' Loans Act were of the greatest use in testing the merits of each application.

Special care also was taken to have the distribution of these donations supervised by reliable official or non-official agency.

The administration of the Fund was uniformly conducted by honorary and unpaid agency, and the expenditure on clerical establishments, stationery and contingencies, amounted to only 1·4 per cent. of the total expenditure.

It is difficult to state exactly the total number of persons who have been relieved by the Fund. The form in which the statistics of persons relieved has been kept does not distinguish clearly between those to whom relief was continuous, *e.g.*, in the shape of a weekly dole for a considerable period of the operations, or given once and for all, *e.g.*, in the shape of a donation or loan with which to start afresh at the end of the famine. Attempts have been made in compiling the statistics to correct this defect by taking the average numbers relieved either daily or monthly, but this was not possible in all districts, and the figures are at best approximate. The compilation of statistics was also hampered by the untrained nature of much of the honorary assistance given. Roughly, however, the following figures show the number of separate persons who came under the influence of the Fund. Some of these enjoyed it for long periods, some for shorter, and some in the form of one substantial donation only, but it is not possible to give any accurate idea of the numbers relieved in terms of one day:—

Under Object	I	...	...	270,878
Ditto	II	...	...	8,202
Ditto	III	...	...	194,678
Ditto	IV	...	...	246,328
Total				720,086

The figures vary from a total of 110,777 persons relieved in Darbhanga to 64 in Howrah. Close upon 70,000 people were relieved in each of the districts of Champaran and Muzaffarpur, 61,000 in Saran, and over 40,000 in Khulna, Gaya, and the Sonthal Parganas. In the 15 districts officially distressed 521,680 persons were relieved, and 198,406 in the remainder of the Province.

A rough approximation of the numbers relieved in terms of one day may be arrived at by taking the expenditure under objects I and III, and assuming that one anna supported one person for one day. Similarly for orphans the expenditure under object II may be taken at the rate of half an anna per child per day. On this basis the numbers relieved in terms of one day would amount to approximately 18,000,000.

The average donation distributed under heading IV amounted to Rs. 3-4.

As to the general result of the operations of the Fund, the Commissioner of General. Patna observes:—

“The efforts of the Committees, working with the assistance of the local officials, have succeeded in distributing the large sums at their disposal to very great advantage. It would be presumptuous and absurd to assert that there has been no peculation and no fraud and deceit, but I believe that there has been little of either; while, on the other hand, I am confident that the funds have been wisely administered with for the most part a scrupulous care and economy which was scarcely to be expected at first.”

The outcome of the operations of the Charitable Fund in these Provinces may be summed up in the words of the Provincial Committee:—

“It has fulfilled the purpose for which it was raised. It has lightened the burden of suffering in multitudes of simple homes. It has stretched out a friendly hand to thousands who held aloof from the colder and more formal charity of the State. And if the gratitude of these has not been loudly proclaimed, it is none the less sincere and abiding. The donors of this munificent charity need feel no fear that their splendid gift was unneeded or unwelcome, or that it has failed to bring forth its full fruit in due season for—

“‘In charity there is no excess: neither can angel nor man come in danger by it.’”

CHAPTER XII.

FOOD-STOCKS AND TRAFFIC IN FOOD-GRAINS.

In no respect does the famine organization of 1896-97 differ more completely from that of 1873-74 than in the relations of Government to the grain trade. From the outset of the famine of 1873-74 the necessity of Government undertaking the importation of grain into the distressed areas was contemplated as probable, and at an early stage it was considered as certain "that while private trade was doing all in its power in many directions with the greatest public advantage, yet there were extensive limits of territory within which it was powerless, and in which there was a general demand beyond its means to supply." Government therefore entered in 1874 upon the task of importing grain to supplement the efforts of private trade. Estimates of the requirements of each district were framed, an elaborate transport system, with a strong reserve train to supply the deficiencies due to casualties, was organised, and the purchase of grain on behalf of Government for the most part in British Barmah was commenced. While the Government of India undertook the task of purchasing the grain over seas and landing it in Calcutta, on the Local Government devolved the task of landing it in the distressed districts. Some idea of the magnitude of the operations will be conveyed by the fact that at the height of operations 88 European military officers and 2,116 native officers and soldiers were engaged in supervising the transport, with a train of over 100,000 carts, some 14,000 pack-animals, 2,300 country boats, and 23 steamers. The Government importations (inclusive of the reserve in Calcutta) amounted to 480,000 tons, of which roughly 345,500 tons were eventually distributed. Out of a total gross expenditure of Rs. 9,91,00,000 incurred on the famine, no less than Rs. 7,00,40,000 was incurred in the promotion of the private grain trade, the purchase of Government grain, and the maintenance of the transport train. Against this may be set the recoveries by sale of grain amounting to Rs. 2,62,40,000 and a sum of Rs. 62,50,000, recovered as the price of grain advanced on loan to raiyats, but even then, there was a balance of some Rs. 3,75,00,000 debitable to this branch of the relief organisation; or in other words the net loss to Government on the grain transactions alone of that year amounted to more than three times the total expenditure by Government on the famine of 1897. It is then manifest that one chief cause of the greater economy with which relief operations were conducted in 1897 lay, in the policy of non-interference with private trade. This policy, which would have possibly failed in 1873-74, was only rendered practicable in the recent famine by the extension of railways and general improvement of communications that has been effected since that time. The fact that a saving of nearly four crores of rupees in famine expenditure has in this way, been brought about affords a remarkable illustration of the wisdom of spending the Famine Insurance Fund on protective public works, instead of hoarding it to be wasted on expenditure connected with hasty and expensive arrangements for transport of food in years of actual distress.

At the very outset of the famine, when the prevailing high prices commenced to attract attention, and by reason of the existence of scarcity in other parts of India the likelihood of food-supplies coming in from provinces other than Burma seemed to be greatly diminished, instructions were issued to all District Officers to institute systematic enquiries as to the stocks in hand, and to endeavour to forecast the possibility of a depletion of food-stocks under the effect of rising prices. The method of enquiry prescribed was the ascertainment as far as possible of the amount of stocks of food-grains believed to be in hand; the aggregate addition to the food-supply expected from the winter rice and *rati* crops, in the two events of the November rains failing or not; the requirements for consumption of the entire population for the coming year, and the probable deficit to be supplied by importation, or probable

Importation of grain by Government during the famine of 1873-74 compared with 1896-97.

surplus which might be available for export in each district. At the same time, it was again declared that Government did not intend to import grain, as was done in 1873-74, or otherwise to interfere with private trade, but that it desired to assist the mercantile community in forecasting approximately the extent to which it might be profitable to import grain from foreign countries. The enquiry was carried out everywhere with thoroughness and minuteness, and a vast amount of valuable information was collected, upon the basis of which, after scrutiny and check, a note summarising the results for the Province was compiled in the Agricultural Department. In forwarding the results of the enquiry to the Government of India, the Lieutenant-Governor observed that while it was never expected that anything like correct quantitative estimates would be obtained of the food-stocks in hand, or of the surplus or deficit in each district above or below the requirements for local consumption, the object of the enquiry had been attained. By the concentration of attention on these subjects, this Government was put in a position, notwithstanding the want of village patwaries or other village revenue officials, such as are available elsewhere, to forecast from the reports of local officers the extent and intensity of the distress and the cost of relieving it, with a far greater approach to accuracy than had ever previously been attained in these provinces, and, it is believed, with as close an approach to the actual requirements of the situation as was attained during the present famine in any other province of India. It is not proposed to discuss in detail the estimates then framed. Here it is sufficient to say generally that the districts in which it was reported that there would be a deficit have in fact had to import food-grains, while those in which it was reported that there would be a surplus have been able to export to districts less favourably situated.

Before proceeding to examine the actual results as shown by the figures of registered traffic in the districts in which famine was acute, it will be instructive to examine briefly the changes wrought by the famine in the course of the trade of the Province as a whole. Detailed information will be found in the appendices attached to this report, but the net results may be briefly summarised. Taking, as will be done throughout for the purpose of comparison, the period from November 1896 to October 1897 as compared with the corresponding period of the previous year, the import trade in food-grains of the Province as a whole, inclusive of the local inter-district traffic, increased in round numbers from 1,245,000 tons to 1,660,400 tons, and the export trade from 1,271,000 tons to 1,330,000 tons. At the same time the net trade of Bengal, to and from outside countries and provinces, showed a total of 649,000 tons of food-grains imported and 664,000 tons exported, so that it appears that if there had been no drain from other Provinces on Lower Bengal, the deficit in the distressed districts might have been made good by the surplus from other parts of these provinces. The extent to which Bengal is in an ordinary year more than self-supporting is shown by the figures of net trade for the corresponding period of the previous year, when 758,000 tons were exported as compared with 271,000 tons imported.

But the effect of the famine will be more clearly shown by considering the sea-trade of the Province separately, and here we find that whereas in the previous year the Province imported 103,000 tons of food-grains by sea and exported 489,000 tons, in the period of famine it imported 470,000 tons and exported only 224,000 tons; in other words, while imports by sea increased by 356 per cent., exports by sea decreased by 54 per cent.

Turning now to the registered trade of the Province with other Provinces in India, including Nipal, Sikkim, Tibet and Bhutan, it appears that while imports fell from 261,000 tons to 235,000 tons, or by 9·8 per cent., exports increased from 272,000 tons to 444,000 tons, or by 63·4 per cent. The most noticeable fluctuations may be briefly referred to. From the North-Western Provinces imports increased by 25 per cent., but exports to the same Province increased by 62 per cent.; and while imports from the Punjab fell by 54 per cent., exports to the Punjab rose by 1,800 per cent. From the Central Provinces imports decreased by 33 per cent. and exports rose by 1,400 per cent. Imports from Assam increased by 33 per cent. and exports to the same Province fell by 10 per cent. Imports from Nipal, Sikkim, Bhutan and

Thibet decreased by 52 per cent. The exports to these countries are insignificant. At an early stage of the famine, the Nipal Darbar had prohibited the export of food-grains; and although grain in large quantities which escaped registration, was smuggled over the border, the embargo must have had an important effect on the trade. The whole of the food-grains exported from Bengal is not comprised of grain grown in Bengal, but the drain upon this Province, which took place in the end of 1896, when famine appeared imminent all over India, was very large.

The course of trade in the districts officially declared to be distressed will naturally exhibit in a more marked degree the same features of increased imports and decreasing exports which characterise the trade of the Province as a whole.

Effect of the famine on the ordinary course of trade in the distressed districts.

In ordinary times every district of the Patna Division except Saran is a large exporter of food-grains. Although the major part of the traffic moves by rail, there is a large boat traffic, notably on the Ganges to Patna; on the Sone canals; down the Gogra from the North-Western Provinces, and on the Gandak. There is a large cart traffic everywhere across the Nepal frontier, only a portion of which is registered, while much of the traffic of Shahabad goes from Zamania, a station outside the Province. Inter-district cart traffic is also important. Traffic by all these routes escapes registration, and the rail-borne traffic affords but an incomplete indication of the total deficit made good by importation of all kinds.

The following statement giving figures of the net excess of imports and exports exhibits the course of the rail-borne trade in the more acutely distressed districts of Bihar, as affected by the famine:—

DISTRICT.	NET EXCESS OF IMPORTS OR EXPORTS OF EACH DISTRICT IN MAUNDS—			
	October 1895 to March 1896.	April 1896 to September 1896.	October 1896 to March 1897.	April 1897 to September 1897.
1	2	3	4	5
Shahabad	I 78,893	E 2,83,357	R 17,791	E 84,300
Saran	I 8,171	I 29,840	I 7,47,688	I 10,05,294
Champaran	E 7,220	E 6,981	I 80,163	I 4,07,867
Muzaffarpur	E 14,166	E 6,039	I 2,29,196	I 6,63,621
Darbhangha	E 90,174	E 40,726	I 31,005	I 11,24,127

I = Imports. E = Exports.

The comparatively small exports from Champaran in the period October 1895 to September 1896 are accounted for by the fact that the greater part of the export from this district does not go by rail. Shahabad, after the *rabi* crop of 1897, was able to export (though to nothing like the extent as after an excellent *rabi* crop in 1896), while Saran went on importing on an ascending scale; but the other three districts exhibit the same features of gradually dwindling exports up to October 1896, and from then onwards a steady and marked excess of imports. Of the three districts, Darbhanga was the last to show the change, and even up to December 1896 exports in this district exceeded imports. The influence of the famine is shown in the converting of districts ordinarily able to export, into districts importing largely for their food-supply. The net surplus of imports by rail over exports in the four northern districts of Bihar during the famine period October 1896 to September 1897 amounted to 160,700 tons. The amount of the imports by road and river is not known.

The rich food-producing district of Bhagalpur at all times exports largely. The famine year was no exception to this rule; extensive and vigorous exportation of grain was the pronounced feature of the year. Directly the *bhadoi* crop was

Bhagalpur Division.

reaped, and the crop failure in other parts of India became a certainty, the local middlemen and outside agents competed with one another in buying up stocks for export. The trade remained brisk till March, when stocks showed signs of depletion. From October 1896 to March 1897 no less than 19,50,429 maunds of food-grains were exported by rail, against 49,323 maunds imported. From April to July imports increased largely, although still exceeded by exports, but with the good prospects of August and September, came round the normal state of affairs, and imports promptly dropped and exports were at once revived. The Sonthal Parganas, like Bhagalpur, is in ordinary times an exporting district, but the abnormal traffic early in the year depleted stocks, and in July and August imports exceeded exports by 34,300 and 35,800 maunds respectively.

The course of trade in the Chota Nagpur Division is not capable of as accurate definition as elsewhere. The Division is backward, and its general inaccessibility and remoteness from the line of rail have already been commented on, while so large a proportion of its trade is conducted by carts and pack-bullocks that in the absence of reliable statistics for this portion, any general view of its trade is necessarily subject to many reservations. The question how far the ordinary efforts of private trade would be able to meet the requirements of the Division was a more anxious and difficult one here than elsewhere. As early as January, the Commissioner (Mr. Forbes, C.S.I.), in view of the seriousness of the situation, and the alarm that was felt, in consequence of the unprecedented rise in prices (which were far higher than those prevailing in the neighbouring Patna Division), and the prohibition of export from the Native States, recommended the importation as a first instalment, of one lakh of maunds by Government agency, and its concentration at Maharajganj on the border of the Gaya district for sale to the general public. To this measure Government were unable to agree, and the Commissioner subsequently modified his proposals to the payment by Government of a bounty of 8 annas per maund on all Burmah rice imported, further enquiries in the Gaya district having given reasons for believing that the local merchants there would undertake to import on these terms. The proposal in this form was finally submitted to the Government of India in February, and received their sanction as an instance of the special cases in which Government interference was justifiable. From the outset the difficulties of transport prevented the traders from taking full advantage of the Government offer, and the amounts actually imported fell far short of what had been anticipated by the Commissioner. In April, therefore, with a view to encourage the Daltonganj merchants to join in the trade, from which the want of funds had hitherto debarred them, an allotment of Rs. 75,000 was sanctioned for loans for the import of grain, on the condition that grain should be brought from outside the district, and no more than Rs. 5,000 advanced to any one individual. During May the restriction of the bounty to Burmah rice was removed, and the privilege extended to all rice, but the difficulty of carriage still continued, and apprehensions commenced to be felt regarding the supplies of grain for Government relief works and gratuitous relief. Other measures were therefore decided on, and 15,400 maunds of Burmah rice were imported by Government *via* Gaya for use on the Government relief works and gratuitous relief only. With the advent of the rains in June, the difficulties of transport were immensely increased, and in July in view of the unmistakable signs of depletion stocks in Lohardaga it was determined to sanction a bounty of Re. 1 per maund up to a limit of Rs. 20,000 on all rice leaving Purulia for Ranchi within one month from 8th August. By the beginning of September, however, the prospects of excellent *khadoi* and *rice* crops removed all ground for further apprehension.

With the exception of one circle in Nadia and a limited tract in Puri, Chota Nagpur was the only area during the famine in which the general policy was departed from, of trusting to private trade to import grain alike for famine labourers, gratuitous relief and general consumption. At one time, however, during May, in the affected area round Ramnagar in the Champaran district, a break-down in the railway traffic caused serious apprehensions as to the sufficiency of the food-supply, but under the prompt action taken traffic fortunately soon resumed its ordinary course. The total importations into Palamau under the bounty system from February to the end of August amounted to 14,227 maunds of Burmah rice and 5,465 maunds of country rice, the total bounty paid being Rs. 9,846. Of the total sum of Rs. 75,000 sanctioned for loans, for purchase and importation of grain Rs. 52,500 was

advanced. In Lohardaga 11,050 maunds were imported under the system of bounties.

With regard to the course of trade in other districts than Palamau, which has been already noticed, the figures of rail-borne traffic in food-grains for the period October 1896 to September 1897 give the following results in the cases of Hazaribagh (*via* Giridih) and Manbhum :—

	Imports.	Exports.	Net excess of imports.
	Mds.	Mds.	Mds.
Hazaribagh ...	2,44,998	5,678	2,39,310
Manbhum ...	3,08,218	15,787	2,92,431

In ordinary years it is calculated that Hazaribagh imports about 2,00,000 maunds of food-grains and exports about 17,500, so the result of the famine was to materially increase imports and reduce exports to practically nothing. Manbhum on the figures of the rail-borne trade in rice for the years 1894—96 exports more than it imports; the famine had, therefore, the result of reversing the ordinary course of trade, but in considering the figures it is to be borne in mind that a good deal of the grain imported during 1896-97 went on to Lohardaga. Of the normal trade of Lohardaga, carried on as it is almost entirely by pack-bullocks through Palamau and Hazaribagh, it is impossible to give any accurate figures. All that can be said is that from October to December 1896 it exported largely; in January exports practically stopped, and in March imports began, and continued till September.

The trade of the Bankura district is ordinarily very restricted, and is all by road. During the famine period exports were abnormally large, and practically exhausted stocks in the affected tracts necessitating the introduction of supplies from the unaffected areas, and to a small extent from Midnapore.

In the Presidency Division the figures of rail-borne traffic for the Nadia district, which appear to show a small excess of exports for the period February to September, are misleading, as the large import of grains by cart from Burdwan, which is estimated at 3,00,000 maunds at least, is not taken into consideration. The *rabi* crops are at all times largely exported, and it is a significant fact that although in the distressed areas the cultivation of rice exceeds by many times that of any other crop, yet the imports of rice and paddy largely exceeded the exports. At one time in one charge in this district rice gave out entirely, and the circle officers were unable to obtain sufficient for their requirements. As no local traders would come forward, a loan of Rs. 20,000 was made to a local grain merchant, and the import of rice by him from Calcutta relieved the situation. In Murshidabad the excellent crops in the "Rarh" enabled exports to exceed imports in every month. The statistics for the Khulna district are of little practical value. The figures for the boat traffic of the district are not available, and without them comparisons are useless. Of Burmah rice alone, it is estimated that not less than maunds 50,000 were imported. In ordinary years large quantities of rice are exported.

The district of Puri ordinarily exports largely and imports practically nothing in the way of food-grains, but the export by sea and rail during the famine period amounted to 108,000 maunds only as against 362,647 maunds during 1895-96. In the out-of-the-way parts of the distressed area round the Chilka lake, it was found necessary to stimulate the import of grain, and Rs. 3,100 was advanced on loan to traders for that purpose. In Satpara also Rs. 860 was spent in importing grain at Government expense for sale at cost price.

It is not possible to give any exact statement of the localities from which the supplies that poured in to meet deficiencies in the affected districts were drawn, but the total imports of Burmah rice into Calcutta during the period from November 1896 to October 1897 amounted to 85,11,756 maunds, or about 312,677 tons; the imports of Burmah rice in the previous year had amounted to 119 tons only. A good deal of this went up-country to other Provinces, but with the exception

of Bankura and Puri, Burmah rice was imported to a greater or less extent into every affected district, the total of such imports amounting approximately to 25,00,000 maunds, as far as can be gathered from the figures supplied by local officers. In the Bettiah subdivision of the Champaran district, Burmah rice for many weeks became the staple food of the people. In the use of this rice the experience of all the affected districts was the same; it sold as a rule about one seer cheaper than country rice, but was not at first taken to by the people. As in the famine of 1873-74, various complaints were made about it—that it was watery, unsatisfying, and conducive to bowel-complaints. As time went on and pressure increased, these complaints died out.

CHAPTER XIII.

THE PRICES OF FOOD-GRAINS.

Not only did prices of food-grains in the affected districts commence to rise at an unusually early stage of the distress, but ultimately reaching a height which had never before been known, they remained practically at this level throughout the period of relief operations. Even when the famine was over and the excellent crop prospects had justified the cessation of Government relief, prices were slow in falling, and in spite of a bumper harvest, have not yet returned to the ordinary level. While the most striking features of these unusual conditions were manifest in the affected districts, the general range of prices in every district in the Province rose far above normal, causing great hardship to all classes, even though an actual state of famine was avoided. It was this circumstance which rendered the assistance afforded by the Charitable Relief Fund necessary and beneficent in nearly every district in Bengal.

The history of prices during the year is necessarily mainly statistical; the circumstances of each district have been elaborately analysed and compared in the district and divisional reports, and it is not necessary here to do more than indicate the most noticeable points which are suggested by the experience of all districts: the suddenness of the rise; its abnormal extent; and its unusual duration and scope, both as affecting the whole Province in area and every description of food-grain in degree. Nothing was more marked than the approximation of the ordinarily more expensive and cheaper grains to the same level—a fact which indicates that stocks of both sorts of grain had alike become depleted, and that the people had to content themselves with quantity, regardless of quality to satisfy their hunger, having had to pay the same prices for inferior and superior food alike. Prices in their general features ordinarily follow the course of the harvests, being cheapest just after the various crops are gathered and dearest just before the new grains come upon the market. In 1896, when the irregularities of the monsoon during July and August began to cause apprehension as to the outturn of the approaching harvests, the market commenced to get unsettled. When the failure of the September and October rains turned apprehension of loss into certainty, not only in this Province, but in the rest of India, prices under the influence of large purchases for export, went up with a bound. This is clearly shown by the price of rice in the affected districts on the 30th September and succeeding two fortnightly periods:—

	Shahabad.	Saran.	Champaran.	Muzaffarpur.	Darbhanga.	Bhagalpur.	Far- Southal ganua.	Hazaribagh.	Palamu.	Manbhum.	Bankura.	Murshidabad.	Naldia.	Khulna.	Puri.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Rice.	S. CH.	S. CH.	S. CH.	S. CH.	S. CH.	S. CH.	S. CH.	S. CH.	S. CH.	S. CH.	S. CH.	S. CH.	S. CH.	S. CH.	S. CH.
30th September	11 0	12 0	14 0	10 0	12 0	11 6	12 4	11 8	11 4	14 0	15 4	12 0	12 0	9 8	17 0
16th October	10 0	10 0	11 4	9 0	11 0	11 4	10 0	9 0	9 0	11 8	13 0	11 0	11 0	9 14	16 0
31st October	8 8	9 0	11 4	8 4	10 0	9 6	9 4	8 12	8 7	13 4	11 0	9 8	8 8	9 0	11 18

As the cold weather went on, and the first panic was allayed, prices remained fairly steady, with a very slight tendency to grow easier as the winter rice, and the cold-weather crops, came upon the market. From March onwards, however, they again hardened, and reached their highest pitch towards the end of July, thence falling slowly as the prospects of the *badai* improved.

Taking the four typical periods—31st October, 31st January, 30th April, and 31st July—the following statement shows in each affected district the percentage of the rise in the price of common rice above the normal:—

	Shahabad.	Saran.	Champanan.	Muzaffarpur.	Darbhanga.	Bhagalpur.	Sonthal Parganas.	Hazari-bagh.	Palamau.	Manbhum.	Bankura.	Nadia.	Murshidabad.	Khulna.	Puri.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
31st October ...	52	60.9	44.6	68.5	56.6	64.2	54.2	52.4	60.0	42.8	19.4	33.5	48.3	46	42
31st January ...	53.3	61.8	77.7	68.4	67.5	91.3	76.8	60.5	91.4	76.5	44.4	59.4	50.3	35.5	76.9
30th April ...	59.5	47.6	76	77.9	90.7	97.8	91.7	108.8	134.7	94.1	55.7	69.2	59.7	62.1	34.2
31st July ...	70.6	47.3	77.2	62.2	90	112.5	100.8	113.9	68.8	59.1	66.5	75.8	80.7	74.1	52.9

These figures speak for themselves, and convey some idea of the severe pressure upon all classes. Common rice has been taken for the purposes of comparison for the Province as a whole in one common staple, although in the Patna Division the coarser grains and pulses, rather than rice, are largely consumed by the poorer classes. But the course of prices of one grain was the course of prices in all.

The highest price actually touched at any time by common rice at the head-quarters of each affected district is shown below:—

	Shahabad.	Saran.	Champanan.	Muzaffarpur.	Darbhanga.	Bhagalpur.	Sonthal Parganas.	Hazari-bagh.	Palamau.	Manbhum.	Bankura.	Nadia.	Murshidabad.	Khulna.	Puri.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
	Sr. CH.	Sr. CH.	Sr. CH.	Sr. CH.	Sr. CH.	Sr. CH.	Sr. CH.	Sr. CH.	Sr. CH.	Sr. CH.	Sr. CH.	Sr. CH.	Sr. CH.	Sr. CH.	Sr. CH.
...	7 0	7 4	7 11	7 0	7 0	7 10	7 0	5 1	5 2	7 1	9 0	7 4	7 4	7 8	...
...	31st July	31st July	31st July	30th June	15th July	30th June	15th Aug.	15th Aug.	15th Aug.	30th June	31st July	31st July	15th July	30th June	15th July

In the Chota Nagpur Division prices in Lohardaga and Palamau touched a height which the Commissioner is probably right in saying was unknown during the famine in any other part of India. On the 31st July rice was selling in Lohardaga at 4 seers and under to the rupee, in 29 different marts in the interior of the district, and on the 15th August at 20 marts in the district of Palamau, at 5 seers and under.

Course of district average prices of common rice and maize in the affected districts during the famine period as compared with the normal.

The annexed chart has been prepared illustrative of the normal course of the average district average prices of common rice and maize, as compared with the actual results of the famine period in the fifteen affected districts.

It will be seen that common rice at the beginning of October starts at a normal average of 15 seers to the rupee, falls slightly in December and January with the in-coming harvest, and rises to its highest point of 13½ seers in the end of July. During the famine year it started at the corresponding period at 11 seers, rose at once to 9½ and 10 seers, remaining fairly steady at that point till the end of March, which saw another rise to 8 seers, at which prices remained, until in September they fell again slightly to about the level of November in the previous year. Maize in its normal course is cheap in October, as the harvest has not long been reaped. It then rises steadily, but with small fluctuations, till it touches the level of 18½ seers in July, from which it falls to 22 and 22½ seers as the harvest again comes round. During the famine period at the commencement of October, the price of maize stood at 15 seers. It then rose rapidly to 11 seers in January, at which approximately it remained till March. Then followed a further rise culminating in June-July at 8½ seers, or at a price nearly as high as that of rice, after which the new harvest and excellent prospects induced a rapid fall. The chart

illustrates clearly the characteristics of the famine period; a range of prices uniformly much above the normal; the sudden rise in October-November, the steadiness of prices between January and March; the further rise in March, culminating about June-July, and the subsequent decline, fairly rapid in the case of maize, but slow in that of common rice.

In comparing the prices prevalent during the recent famine with those prevailing in the famine of 1873-74, it is necessary to remember that a large rise in normal prices has taken place in the intervening 23 years, but, allowing for that fact, the following statement still

Comparison of prices with those prevailing in the famine of 1873-74.

indicates how much higher was the general range of prices during the recent famine. Taking the four typical periods as above, the percentage of increase in the price of common rice over its price for the corresponding period of 1873-74, is shown below :—

	Shahabad.	Saran.	Champanan.	Muzaffarpur.	Darbhanga.	Bhagalpur.	South Patna.	Hazratbagh.	Palamau.	Manbhum.	Bankura.	Nadia.	Murshidabad.	Khulna.	Purl.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
31st October ...	56.9	43	67.7	97.1	73.6	84.8	46.4	46.8	30.3	49.1	30.3	77	57.3	140.	178.5
31st January ...	84.7	81.5	87.8	10.5	190.	18.3	46.4	66.4	58.7	63.8	88	81.1	19.3	85.6	114.5
30th April ...	30.1	25.1	14.5	15.1	190.3	30.	23.3	70.7	67.7	47	30.9	70	38.1	56.7	111.9
31st July ...	56.8	40.4	63.1	55.5	191.8	57.8	27.3	115.8	71.9	73.3	40.3	63.3	61.3	68.3	144.1

In addition, moreover, to the fact that prices during 1873-74 never touched the level that was reached during the recent famine, they were both later in rising and earlier to fall. The large importations of Government grain during the former famine, and its sale at the rate of 10 and 12 seers to the rupee, kept prices in that year lower than they otherwise would have been, while neither did the famine of 1874 extend to other parts of India, nor were there then existent the means of communication between district and district and province and province, which while tending to equalise prices over a large area, tend to do so by levelling up in the producing area and levelling down in the area of deficit. That prices, notwithstanding the recent bumper rice harvest, are still above the normal is possibly due to the replenishing of old hoards which had become depleted during the recent famine, with the result of absorbing some of the surplus produce of the recent harvest, which ordinarily would be brought into the market for sale.

CHAPTER XIV.

STATE OF PUBLIC HEALTH AND CONDITION OF CATTLE.

The examination of the vital statistics of the affected districts in a time of famine is of the greatest importance, both for the discovery of any abnormal increase in mortality or, if this feature is absent, as should be the case had the administration of famine relief been taken in hand in time and efficiently conducted, for any indication of decrease in stamina of the people, whether indicated in greater liability to disease, or in a decreasing fecundity and consequently diminishing birth-rate. The proper function of vital statistics in famine administration is not by an abnormal death-rate to prove the existence of a famine, but rather to indicate the degree of success which has attended the efforts of Government in meeting it. A large mortality from starvation pre-supposes the failure of the Government measures; but while Government may undertake, as far as possible, to prevent starvation, it is unable to prevent a large degree of deterioration in the general well-being of the population, which will manifest itself in the vital statistics of the period.

In these Provinces up to the year 1891 the registration of vital statistics, which is compulsory in urban areas only, was in the hands of municipal agency. In that year the failure of the existing system being

Method of registration of vital statistics in Bengal.

shown in the rates recorded, which were manifestly below what was known to be the birth and death-rate of the Province, the duty of registration was made over to the town police, and at the same time the registration of births was extended to rural areas. The system now in force is to collect vital statistics by the agency of the police and chaukidars. It is the duty of the chaukidars, who are supplied with proper forms for the purpose, to report both births and deaths at the weekly parades at the police-stations, the returns so collected being subsequently compiled. The work of the chaukidar is subject to supervision by the police and other inspecting officers on their visits to the villages, but the agency is at best defective, though none better can be devised. Even granting that the actual number of births and deaths is recorded with some approach to accuracy, and allowing for the greater attention given to the subject in recent years, yet in the cause of death as reported there must always be a large margin of error in statistics based on reports of illiterate and uneducated chaukidars.

The following table shows the death rate of the affected districts, both for the entire district and for the area affected in each, as compared with the average of the preceding five years:—

Districts.	Whole District.			Affected Tract.		
	Average of five years ending 30th September 1895.	1896-96.	1896-97.	Average of five years ending 30th September 1895.	1896-96.	1896-97.
1	2	3	4	5	6	7
1. Shahabad ...	32.80	39.63	38.80	34.87	30.50	38.22
2. Saran ...	31.89	31.99	28.43	34.90	32.69	27.73
3. Champaran ...	36.07	40.93	34.60	31.20	41.40	34.03
4. Muzaffarpur ...	38.23	47.90	30.63	38.28	47.90	30.63
5. Darbhanga ...	32.00	48.90	28.20	32.00	48.90	38.20
6. Bhagalpur ...	34.09	37.80	27.03	30.25	40.00	34.83
7. Sonthal Parganas ...	22.36	25.57	25.18	25.77	23.49	38.13
8. Hazaribagh ...	33.32	37.37	43.83	32.95	38.12	48.35
9. Palamau ...	33.91	31.21	36.40	33.91	31.21	36.40
10. Manbhum ...	25.35	28.24	31.39	21.77	24.76	27.78
11. Bankura ...	26.37	32.64	27.17	25.96	29.11	39.41
12. Nadia ...	24.78*	48.25	26.67	Not available	47.53	33.33
13. Murshidabad ...	33.18	37.70	27.26	31.18	38.14	24.09
14. Khulna ...	31.42	39.53	34.09	33.03	41.29	33.17
15. Puri ...	30.11	27.44	24.81	32.81	28.21	25.00

* Figures for nine months only.

The figures will be found to differ slightly from those supplied by the Sanitary Commissioner, whose note forms one of the appendices of this narrative, allowance having been made by him for variations in the population since 1891, the year of the last census. The only districts which show a rate of mortality in excess of the average rate of the five years ending with September 1895, not only throughout the whole district, but in the affected tracts also are—Shahabad, the Sonthal Parganas, the three affected districts of the Chota Nagpur Division, and Bankura. In Khulna the death-rate throughout the district was above the average, but in the affected area it was about the same.

In Shahabad the physical condition of the affected area is in ordinary times poor. The rise in mortality is attributed to outbreaks of cholera and small-pox, with a high mortality from fever in August and September 1897. In the Sonthal Parganas there was some sporadic cholera, attributed to the partial failure of the water-supply and to bad and insufficient food. In Chota Nagpur up to April and May 1897 the year was comparatively healthy. A change for the worse then occurred. Cholera broke out in Manbhum in April, and in Hazaribagh and Palamau in May and continued to September. Mortality under the head of fever also increased largely, and there was some small-pox in Manbhum. The figures of the mortality per mille in the affected districts from June to September as compared with the normal rate are shown below:—

			HAZARIBAGH.		PALAMAU.		MANBHUM.	
			5 years' aver. age.	1897.	5 years' aver. age.	1897.	5 years' aver. age.	1897.
1	2	3	4	5	6	7	8	9
June	2.63	3.03	3.39	3.59	2.40	4.00
July	3.00	6.34	2.97	4.17	2.51	4.08
August	3.50	10.51	3.22	6.43	2.66	4.48
September	3.08	6.59	3.32	5.29	1.94	2.98

The Civil Surgeon of Hazaribagh has remarked:—

“It cannot be concealed that the debilitated condition of the people made them more subject to fatal disorders, and further that a portion of the population during the rains was living on jungle products, which, as articles of food at this period of the year, were distinctly deleterious to health, but it is also absolutely certain that the rainy season of this year (1897) was a very abnormally unhealthy one, causing an excessive prevalence of bowel-disorders and fevers amongst all classes of the population, whether subject to scarcity or not.”

The Civil Medical Officer of Palamau is similarly of opinion that while famine did not operate as a direct cause of any disease, yet constitutions were deteriorated by privation, and want of food brought on such a state of physique that the sufferers fell ready victims to very slight indispositions. There were three deaths from starvation reported in Lohardaga,—all of wanderers, whose names and residences could not be traced. In Manbhum 17 deaths from starvation were reported, but on thorough enquiry in each case death was found due to other causes. The reluctance of the aboriginal tribes in Chota Nagpur to come on relief works, and their preference for an independent life of extreme privation while subsisting on jungle products, has already been referred to, and it was inevitable that much suffering should have been experienced and the indirect mortality increased. In the affected area in Bankura the increased mortality was due to the outbreak of cholera between March and June. In Khulna too cholera was prevalent, attributable to the deficient water-supply; the water in the affected tracts was more or less impregnated with salt, and people had often to travel miles to get fresh water for cooking and drinking. Under the circumstances of this district, the provision of a better water-supply is a matter of time, but the 40 tanks excavated as famine relief works and 43 more dug by private persons from Government loans effected a much-needed and substantial improvement.

In the remaining affected districts the mortality was below the normal rate. The reason is to be sought in the scanty rainfall of 1896. The ground never becoming saturated, there was less malaria and autumnal fever, while the year 1897 was, generally speaking, extraordinarily free from cholera. This is the more remarkable when it is remembered that the water-supply everywhere ran short, but against this is to be set the increased attention given to the matter of preservation of the water-supply and the instant remedies which were taken wherever cholera made its appearance. The effects of diseases aggravated by want and insufficient and unsuitable food were, however, traceable, especially after the breaking of the rains. In the Patna Division the death-rate in every district rose above normal in August, and, except in the districts of Patna (not distressed) and Shahabad, remained above normal in September. On the other hand, things had by that time taken a turn for the better, and a district like Gaya, which was not distressed, showed an excess above normal as large or larger than the others. Bhagalpur is reported to have enjoyed "an exceptional immunity from disease," while disease in an epidemic form was also absent in Nadia and Murshidabad in the Presidency Division.

But apart from the positive evidence of the prevailing death-rate during the famine period, the figures of birth-rate in the affected districts as compared with those of the previous year afford evidence of some lowering of the stamina of the people, and consequently lessened fecundity. For the purposes of comparison a longer period than the previous year cannot safely be taken: the registration of births in rural areas was only introduced into Bengal in 1892, and the figures of 1892 and 1893 are admittedly defective. A comparison with the figures of the period October 1896 to September 1897 with the corresponding period of the previous year gives the following results according to the figures supplied by the Sanitary Commissioner:—

DISTRICTS.		Birth rate during 1895-96.	Birth-rate during 1896-97.
1		2	3
Shahabad	...	37.19	34.90
Saran	...	36.25	33.40
Champanan	...	41.33	32.41
Muzaffarpur	...	43.37	37.31
Darbhanga	...	41.38	37.09
Bhagalpur	...	39.54	38.53
Sonthal Parganas	...	39.45	30.51
Hazaribagh	...	43.53	37.56
Palamau	...	42.63	35.77
Manbhum	...	41.31	33.38
Bankura	...	39.05	39.93
Nadia	...	41.04	43.20
Khulna	...	36.25	34.08
Murshidabad	...	46.29	44.28
Puri	...	35.78	40.04

The general decrease in the birth rates as compared with the corresponding twelve months of the previous year is remarkable, and, in the absence of any general epidemic disease, the result can, in the opinion of the Sanitary Commissioner, only be attributed to the effects of the scarcity deepening into famine, which commenced to spread over the districts, when with the irregularities of the monsoon during 1896, a serious crop failure became certain.

It has already been mentioned that special famine hospitals were opened in seven districts, and between the months of January and October 41,113 patients were treated in them, of whom 992 or 2·4 per cent. ultimately died. Both the total admissions and mortality were heaviest by far in Champaran, where a portion of the distressed area lay in a notoriously unhealthy tract, in which the health of the supervising staff was severely tried. Next in order as to admissions come Muzaffarpur, Darbhanga, and Saran. The mortality as compared with admissions was highest in Shahabad and Saran. Sickness and mortality combined were greatest in the months of June, July, and August, and the majority of the cases treated were sufferers from malarious fevers and splenic diseases; 305 cases of cholera with 39 deaths were treated in the famine hospitals and in the villages by the special medical staff deputed to famine duty; the majority of the cases (264) were from Champaran. Of small-pox, there were 134 cases and 4 deaths, the greater number of cases (97) again being in Champaran.

As regards the condition of the cattle, little need be said. There is no evidence that their condition generally deteriorated, while in some ways they were better off than usual. On the failure of the *bhadoi* and rice crops in many places, the cattle were allowed to graze them down, and the winter rains afforded a certain amount of green pasture. At the same time decrease in cultivation, especially in the area under the cold-weather crops, involved less field-work to be done. Only in Shahabad and Puri was mortality from want of fodder and water reported. There was a sharp outbreak of rinderpest in Muzaffarpur in July, but nowhere else was there cattle-disease to any exceptional extent or calling for special preventive measures. In Khulna many plough cattle are said to have been sold, and in the Patna Division a good many changed hands locally and into Nipal, but no where to such an extent as to cause any depletion of the stock or any difficulties in cultivation.

CHAPTER XV.

EFFECTS OF THE FAMINE ON CRIME—REVENUE AND EMIGRATION.

INFLUENCE OF THE FAMINE ON CRIME.

The influence of high prices of food-grains upon crime, and especially upon offences against property, is well known, and the relation between hunger and rioting, and theft, with its kindred offences of dacoity, burglary, and robbery, is nowhere more clearly exemplified than in the crime statistics during the period of the recent scarcity. The people of Bihar and Bengal are peaceful, patient under suffering, and law-abiding, but notwithstanding this the statistics given below afford a plain indication of the severity of the distress that recently afflicted parts of these Provinces. Though there was no resort to open violence except in one or two instances of grain-rioting at Dinapore during the early stages of the scarcity, and though no serious attempt was made anywhere to resist the authorities, yet there was a very large increase in petty pilfering of grain, petty thefts, and offences against property generally. For the purposes of comparison the offences of theft, robbery, burglary, and dacoity have been taken, and the period that from 1st October 1896 to 30th September 1897, during which the influences of the famine may be considered to have been most fully operative. Within those months the total number of such offences reported in the affected districts was 34,952, as compared with 20,865 and 10,942 in the corresponding periods of the two previous years. The increase is remarkable, being no less than 71·3 per cent. over the average of the two preceding years. The fluctuations in the different quarters of the famine period are no less noticeable. The total number of offences against property in the affected districts rose steadily with each succeeding quarter. For every district except Khulna the number of offences rose in the quarter January to March. In the succeeding quarter the rise continued in the districts of Bhagalpur, Sonthal Parganas, Bankura, the three affected districts of the Presidency Division, and the distressed districts of the Chota Nagpur Division with the exception of Palamau. In the districts of the Patna Division, in Palamau, and in Puri there was a decrease in crime as compared with the previous quarter, in the quarter from April to July, after the reaping of the *rabi* crops; but crime again increased when the temporary relief afforded by these crops had ceased, and reached its highest level in every district during the quarter July to September.

It is under the headings of burglary and theft that the most notable increase took place. For the Province as a whole the figures show an increase of 43·47 and 31·19 per cent., respectively, for the period 1st October 1896 to 30th September 1897 over the mean of the corresponding periods of the two previous years.

In the affected districts the percentages of increase similarly calculated were as follows:—

	Shahabad.	Sirao.	Champan.	Muzaffarpur.	Darbhanga.	Bhagalpur.	Sonthal Parganas.	Hararibagh.	Palamau.	Mandhum.	Bankura.	Nadia.	Murshidabad.	Khulna.	Puri.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Burglary ...	48·10	37·78	91·12	95·47	74·74	69·8	115·8	93·1	113·1	214·4	216·5	12·7	86·7	67·0	78·2
Theft ...	30·64	58·09	72·43	123·60	76·11	96·9	73·27	69·5	95·3	102·7	37·9	72·1	10·8	214·0	53·1

These figures are instructive: they correspond to some extent with the degree of distress experienced, and, apart from all other evidence, furnish a sufficient answer to those who, in ignorance of the real situation, at one time feared or imagined that relief was being given more freely than necessary in these Provinces. Thus in the Patna Division the largest increase was in the most affected districts of Champan, Muzaffarpur, and Darbhanga. The

large increase in Chota Nagpur is coincident with the severity of the distress there experienced, and its peculiarly abnormal character is due to the fact more than once referred to in the course of this narrative, of the aversion of the wild people in that Division to availing themselves of the relief offered by the State; the increase of crime in Murshidabad, where distress was slight, was much less; while again in Khulna and Nadia, in parts of which distress was greater, the figures rose very largely.

Apart from this phenomenal increase in burglary and theft, the criminal histories of several districts during the period of famine present features of special interest.

General.

In the Shahabad and Champaran districts of the Patna Division, dacoities show a noticeable increase. The grain dacoities in the Bhabhua subdivision in the end of 1896 afforded one of the earliest signs of the feeling of unrest that was abroad. In the Champaran district only two technical dacoities were of grain. Arson, with a view to discovering and plundering hoards of grain, which is a common feature of scarcity, was extremely prevalent, notably in Darbhanga and Champaran, but the reported figures give little indication of the real extent of the crime, as many fires were not reported and others returned as accidental which were probably intentional. In the Bhagalpur district dacoities show an increase, but it was in the technical crime only, and the district is reported to have been singularly free from any eruption of lawlessness, the people bearing their hardships with singular patience. In the Sonthal Parganas there was a considerable increase in dacoity—31 cases against 3, the mean of the two preceding years. Most of them were grain-looting cases. Special measures were taken to check this crime, and prosecutions were in most cases successful, while an efficient patrol of the roads had the satisfactory result of preventing any cases of loot of grain in transit. There was a remarkable increase in dacoity in the distressed districts of the Chota Nagpur Division of no less than 336·8 per cent. over the mean figures of the previous two years. None of the cases are said to have been serious, but of the total of 83, the majority are said to have been loots of grain. There was a satisfactory absence of grain riots in the affected districts of the Presidency Division.

General wandering of distressed people from one district to another

EFFECT OF THE FAMINE ON EMIGRATION AND IMMIGRATION.

was not a prominent feature of the famine in these Provinces. On the borders between adjacent districts, a certain number of people may have crossed over into the next district in search of work, but only in so far as it was accessible from their own homes. In the border districts marching with the North-West Provinces, people from Gorakhpur found their way into Bettiah and the Gopalganj subdivision of Saran. On the other hand, it is possible that many from the districts of Bengal wandered into the North-West Provinces; though owing to the superior reputation Bengal enjoys among up-country people as a land of plenty, the natural tendency was to wander towards Calcutta. The number of travellers down the Grand Trunk Road was larger than usual, and, as has been shown, necessitated special measures for their maintenance.

The only distressed districts from which emigration to Assam and the colonies takes place annually on any considerable scale are the Sonthal Parganas, the districts of the Chota Nagpur Division, and Bankura. In the Sonthal Parganas a comparison of registered emigrants for the period January to September for the years 1895, 1896, 1897 gives the following results:—

			Adults.	Dependents.
1895	...	...	1,204	125
1896	...	...	1,618	211
1897	...	...	2,763	1,484

But the increase is progressive in ordinary years, and is due to the freer intercourse with Assam, and is not only attributable to the scarcity, though that too may have had some slight effect. The mass of the emigration, however, is what is called "free" emigration, for which no reliable statistics are available. In the Chota Nagpur Division the emigration from the Native States into

British territory was very small. Emigration from all districts increased. During the period of distress 6,947 persons are reported to have emigrated from the Hazaribagh district, against 2,095 for the corresponding period of the previous year. From Manbhum 4,766 people were registered as emigrants in 1897, against 1,073 in 1896. From Palamau also emigration increased. The figures cannot pretend to accuracy, as a great deal of emigration escapes registration. In Bankura the number of registered emigrants during 1896-97 was 471 as compared with 264 and 209 in the two previous years respectively. Free emigration was unusually brisk, and from a census taken of emigrants of this class in March, it appeared that the large numbers of 6,234 and 2,243 had emigrated from the distressed areas of the Raipur thana and Simlapal outpost alone, many villages being found almost devoid of males. In the Khulna district a considerable amount of internal migration took place, especially from the distressed area to the eastern parts, where the harvests were good and the lands better protected from the salt water.

From the districts of the Patna and Bhagalpur Divisions migration of labourers eastwards at the beginning of the cold weather for temporary employment in the harvest fields and on roads, railways or any odd employment that offers, takes place in ordinary years on a considerable scale, the labourers returning at the end of the hot weather in time for the agricultural operations in their own district, which commence with the bursting of the monsoon. Such emigration took place in increased numbers during 1896-97, but no accurate statistics are available. Migration of this kind in the Patna Division is greatest from the Saran district and least from Champaran and Darbhanga. The home remittances of these emigrants are an important feature in the economic aspect of the Division. That very large remittances come into the Division by money-order (the favourite means for an emigrant to remit his savings) is shown by the following figures of sums remitted in this way into the Division as a whole:—

				Rs.
1884-95	...	...	...	94,34,064
1895-96	...	...	...	1,00,86,541
1896-97	...	...	...	1,10,86,359

The increase during 1896-97 is noticeable. All these remittances are not made by emigrants, but the greater portion of money-orders are for petty sums of less than Rs. 10—a fact which supports the belief that remittances by emigrant labourers, including small cultivators, constitute no unimportant share of the total. On the whole the famine had no great effect in stimulating emigration.

Speaking generally, the famine has had little effect upon the collection of land revenue, and the collections of 1896-97 only showed a decrease of Rs. 90,255 in comparison with those of 1895-96. In Government estates collections from the raiyats were to some extent suspended, but the greater part of the distressed area being under the Permanent Settlement and the incidence of the land revenue light, it was not to be expected that there would be any great necessity for remissions, or permanent falling off in collections. The decrease in revenue during 1897-98 is estimated by the Board of Revenue at Rs. 8,00,000; but looking to the excellent outturn of the late winter rice and favourable prospects of the coming *rabi* crops, it is doubtful whether the decrease will be more than Rs. 4,00,000, or even whether that is not excessive. Special circumstances existed in special localities as exceptions to this general rule. In the Bhabua subdivision of Shahabad, where the landlords are mostly impoverished, leniency was shown in the enforcement of the sale law, but the arrears thus allowed to accrue will be subsequently realised. In Palamau the March *kist* of 1897 showed large defaults, and the percentage of total collections on total demand for 1896-97 fell to 70·04 per cent. from 89·5 per cent. in 1895-96. In Nadia it was found necessary to remit Rs. 2,185 out of a demand of Rs. 18,610 in the Government khas mahals of the Kushtia and Meherpur subdivisions. In Khulna, too, small remissions were given, while the collection of revenue from temporarily-settled estates in the Sunderbans showed a

marked decrease from 80·28 to 67·73 per cent. In Puri it was found necessary to grant remission during 1896-97 to an aggregate amount of Rs. 80,025.

In cesses where the opportunities for defaulting are more frequently availed of and the penalties for default are less than in the case of land revenue, there was no general decrease in collections.

The effect of the famine on the excise revenue was more perceptible, and is described in detail by the Excise Commissioner in a memorandum which forms one of the appendices to this report. The gross receipts during the last seven years were as follows:—

YEARS.	Gross receipts.	Increase.	Percentage of increase.
1	2	3	4
	Rs.	Rs.	Rs.
1890-91	1,04,60,932	.....	.....
1891-92	1,11,29,813	6,68,881	6·39
1892-93	1,16,00,621	4,70,808	4·23
1893-94	1,21,37,096	5,36,475	4·62
1894-95	1,25,67,855	4,30,759	3·54
1895-96	1,33,77,705	8,09,850	6·44
1896-97	1,34,10,579	32,874	·24

Thus, though there was an increase of Rs. 32,874 in the receipts of 1896-97 as compared with those of 1895-96, it is manifest that the steady growth of recent years met with a decided check. The average annual *net* increase during the years 1891-92 to 1895-96 was Rs. 4,31,792, or say 4 lakhs; and at this rate the expected revenue for 1896-97 should have been Rs. 1,33,77,705 (the revenue of 1895-96 + Rs. 4,00,000 = Rs. 1,37,77,705), against the actual revenue of Rs. 1,34,10,579, and in this light it may be said that there was a real loss of Rs. 3,67,126, or roughly 3½ lakhs, due to the famine. Settlements having been concluded before the scarcity made itself felt, the effect of the scarcity was noticeable not so much in license-fees, as in the revenue derived from duty. The heaviest loss was in the Patna Division, where the total decrease amounted to Rs. 1,03,373. In the Sonthal Parganas and Palamau also there was a heavy falling off under the head of country spirits. The probable receipts for 1897-98 are estimated at Rs. 1,28,46,338, or less than those of 1896-97 by Rs. 5,64,241, or roughly 5½ lakhs. On the other hand, if the steady growth in the annual increase had been maintained, a revenue of Rs. 1,41,78,000 could have been expected in 1897-98, against the probable estimate of Rs. 1,28,46,338, the difference being Rs. 13,31,662, or approximately 13 lakhs. A serious decrease during 1897-98 is anticipated in the Chota Nagpur Division. In short the total loss in excise revenue due to the famine is estimated at about 16½ lakhs of rupees.

Stamps.—The following figures show the revenue derived from the sale of stamps during the last six years:—

		Rs.	Increase. Rs.
1891-92	...	1,51,00,000	.....
1892-93	...	1,55,45,000	4,45,000
1893-94	...	1,59,76,000	4,31,000
1894-95	...	1,67,01,000	7,25,000
1895-96	...	1,67,72,000	71,000
1896-97	...	1,75,74,000	8,02,000

The major portion of the increase, amounting to Rs. 4,32,586, was obtained from the sale of non-judicial (impressed) stamps, due to the execution

of a large number of bonds and documents, which may to a great extent be attributed to the scarcity. The estimate of receipts for the sale of stamps during 1897-98 amounts to Rs. 1,73,20,577. It is likely, therefore, that an increase rather than a decrease of stamp revenue will result from the famine, the falling off in suits instituted being more than compensated for by the execution of bonds and mortgage deeds.

The increase in the registration of deeds of sale and mortgage and of money bonds is clearly shown by the figures for the last three years :—

Registration.				
	Year.	Sales.	Mortgages.	Bonds.
	1895 ...	... 299,986	306,104	102,139
	1896 ...	... 313,986	327,675	111,243
	1897 ...	... 377,236	431,609	135,284

The most remarkable instances of increase were in the Darbhanga, Champaran, and Muzaffarpur districts.

The effects of the famine upon forest revenue were felt in the Sundarbans and Chittagong Forest Divisions. The estimated loss on this account amounted to Rs. 72,000 in 1896-97 and Rs. 65,000 in 1897-98, or Rs. 1,37,000 in all. The greater part of the loss was in the Sundarbans. The loss arising from the concession given in the reserved forests of the Chota Nagpur and Orissa Divisions of taking edible roots and fruits free of charge was insignificant, and is estimated at some Rs. 400 only.

CHAPTER XVI.

CONCLUSION.

Little need perhaps be added to what has already been written on the history of the recent famine. It has been shown how the intervention of Government was necessitated by the serious crop failure resulting from the abnormal rainfall of 1896, which, while succeeding a year of seriously deficient harvests, was aggravated by similar conditions obtaining at the same time in the greater part of India. The nature and organisation of the relief measures undertaken by Government have been indicated, and the degree of success attending its efforts for the prevention of starvation has been described. At the same time, the assistance rendered to Government by the measures of public and private charity has been acknowledged, and finally the effects of the famine upon the different branches of the administration and on the general well-being of the people have been traced.

Many lessons have been learnt during the recent famine, and much experience gained which will be of the utmost value should a similar calamity again overtake the Province. It is not, however, the purpose of the present narrative to discuss the changes and modifications which the experience so acquired may suggest in the recognised methods of dealing with famine, but in reviewing as a whole the recent famine relief administration, reference may well be made again to the various salient points which the operations suggest. It has been seen that although the rainfall of 1896, succeeding a monsoon which had been almost as unfavourable, was even worse distributed than in 1873-74, and although the failure of crops had been as great as in the famine of that year, yet the necessary relief was given to all who required it at a cost of approximately one-sixth the sum expended during the earlier famine. It has been shown that this greatly reduced cost of the recent relief operations was due primarily to the policy, wisely adopted and courageously persevered in, of absolute non-interference with private trade, and in a secondary degree to the greatly improved methods and knowledge of famine relief administration, both in the exaction of adequate tasks from the able-bodied as a test of distress, and in the careful selection from among those unable to work of suitable objects for gratuitous relief. At the same time the mortality from starvation was practically nil, and the people while maintained in good case, were able and willing to return of their own accord to their ordinary pursuits as soon as the *bhadoi* harvest was reaped and the prospects of the winter rice assured.

As to how far the events of the recent famine have indicated any increase in the powers of the people to resist the effects of bad seasons, detailed and laboured comparisons and deductions from the experience of 1874 have not been attempted. That under less favourable circumstances than in 1873-74 the numbers requiring Government relief should have been so much less, would appear to establish the fact of a general improvement in the general circumstances of the people, but the whole conditions of the relief administration during the two famines were so different, that the inference is not so conclusive as it would have been had the same methods been adopted in both cases. Nevertheless, the general experience and observations of the officers engaged in the famine, some of them with knowledge of the facts both then and now, as well as the concurrent opinions of non-officials acquainted with these provinces, do indicate that, even in Bihar, during the past quarter of a century, there has been a considerable advance in material prosperity, and that the power of the country as a whole to withstand the calamities of seasons has greatly increased.

That the benevolence of Government was able and far reaching enough to embrace every creature in want of the means of subsistence, had already been brought home to the people by the events of 1874, and the history of the past year can only have emphasised that lesson; but at the same time the administration of the recent famine has taught the useful corollary, that the benevolence of Government is not indiscriminate, and that Government has both the intention and the power, to ensure that its benevolence shall

not be abused. The great efforts made by Government and the noble and spontaneous charity of the English people cannot have failed to have imbued the minds of the people with a sense of gratitude and appreciation, and as charity blesseth him that gives as well as him that takes, the intimate relations which the famine operations have entailed between the distressed people and those to whom the administration of relief was entrusted, cannot but have created on both sides a feeling of greater mutual knowledge and sympathy. While the patience and fortitude with which the great mass of the people have borne their undoubted sufferings has evoked the sympathy and admiration of those whose task it was to relieve them, it has been brought home to the minds of those relieved, that Government and its officers have a very real desire and power to assist them.

His Honour has separately placed on record in a Minute of this date, his high appreciation of the efforts of individual officers upon whom has fallen the burden of the famine administration, but in expressing generally the cordial thanks of Government for the ability and devotion with which their anxious duties have been performed, Sir Alexander Mackenzie desires to express his entire concurrence in the opinions already expressed by Mr. Stevens, while officiating as Lieutenant-Governor, as to the complete success which has been attained by them in the operations now brought to a close.

ORDER.—Ordered that this Resolution be published in the *Calcutta Gazette*, and that a copy of it with copies of its appendices be submitted to the Government of India.

By order of the Lieutenant-Governor of Bengal,

M. FINUCANE,

Secy. to the Govt. of Bengal.



SUPPLEMENT TO The Calcutta Gazette.

WEDNESDAY, MARCH 16, 1898.

OFFICIAL PAPERS.

[Non-Subscribers to the GAZETTE may receive the SUPPLEMENT separately on payment of Six Rupees per annum if delivered in Calcutta, or Twelve Rupees if sent by Post.]

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Abstract of the Proceedings of the Council of the Lieutenant-Governor of Bengal, assembled for the purpose of making Laws and Regulations under the provisions of the Indian Councils Acts, 1861 and 1892.

THE Council met at the Council Chamber on Saturday, the 26th February, 1898.

Present:

The Hon'ble SIR ALEXANDER MACKENZIE, K.C.S.I., Lieutenant-Governor of Bengal, *presiding*.
 The Hon'ble C. W. BOLTON, C.S.I.
 The Hon'ble W. H. GRIMLEY.
 The Hon'ble J. G. H. GLASS, C.I.E.
 The Hon'ble H. H. RISLEY, C.I.E.
 The Hon'ble RAI DURGA GATI BANERJEE, BAHADUR, C.I.E.
 The Hon'ble J. PRATT.
 The Hon'ble G. TOYNBEE.
 The Hon'ble NAWAB SYUD AMEER HOSSEIN, C.I.E.
 The Hon'ble M. FINUCANE, C.S.I.
 The Hon'ble A. H. WALLIS.
 The Hon'ble SAHIBZADA MAHOMED BAKHTYAR SHAH, C.I.E.
 The Hon'ble M. C. TURNER.
 The Hon'ble NORENDRA NATH SEN.
 The Hon'ble KALI CHARAN BANERJEE.
 The Hon'ble SURENDRANATH BANERJEE.

DISTRICT AND SESSIONS JUDGE FOR KHULNA.

The Hon'ble BABU SURENDRANATH BANERJEE asked—

I have the honour to ask whether the attention of the Government has been called to the serious public inconvenience which is caused by there not being a separate District and Sessions Judge for the district of Khulna?

Whether it is the case that when Khulna was formed into a separate district, the Secretary of State sanctioned the appointment of a separate District and Sessions Judge for Khulna, and whether or not, on a reference being made to the High Court, the Commissioner of the Division and the District Judge of Jessore, who performs the duties of District Judge for Khulna, these authorities recommended the appointment of a separate District Judge for Khulna?

Whether or not, in consequence of the Sessions Judge of Jessore being also Sessions Judge of Khulna, the Sessions cases are often tried many months after the occurrences to which they refer, and the interests of justice thus suffer, and for the same reason persons who after trial are found not guilty, have to remain in *hajat* for months together, and criminal appeals are not disposed of in time, although the District Judge is a very hardworking officer?

Having regard to these considerations, will the Government be pleased to sanction the appointment of a separate Judge for the district of Khulna?

The Hon'ble MR. BOLTON replied:—

"A general reply may be conveniently given to the Hon'ble Member's questions. The present arrangement in regard to the district of Khulna causes inconvenience and delay in the disposal of judicial work. When Khulna was constituted a district in 1882, the civil and criminal jurisdiction was vested in the District and Sessions Judge of Jessore. In 1891 work having increased in Backergunge, Dacca and Jessore-Khulna, an Additional Judge was appointed for those districts, to which Mymensingh was added in 1893. The relief thus given has, however, been found inadequate, and a recommendation with the object of increasing it has been made to the Government of India, who have called for a further report. Khulna itself would not provide sufficient employment for a separate District and Sessions Judge. It should continue to form with Jessore one Sessions Division, and provision should be made for further assistance to both the Judge of that Division and the Judges of the other districts named."

THE CYCLONE AT CHITTAGONG.

The Hon'ble BABU SURENDRANATH BANERJEE asked—

Will the Government be pleased to state what was the total number of (a) human lives, (b) cattle, and (c) houses destroyed by the late cyclone and the storm-wave, respectively, in the district of Chittagong?

What sum of money has been spent in the areas affected in giving relief in food, &c., and in the re-building of houses, and from what sources these funds have been supplied?

The Hon'ble MR. FINUCANE replied:—

"The number of human lives lost in Chittagong is reported to be about 14,000.

"The number of cattle lost is estimated by the Collector at 15,000. The number of houses destroyed is not known.

"A sum of Rs. 65,000 has been placed at the disposal of the local officers for the relief of distress, of which Rs. 50,000 was given from the funds of the Provincial Charitable Relief, and the rest was made up by other subscriptions. Of this Rs. 30,899 was expended up to the middle of January. Rs. 50,000 have been sanctioned by Government for advances under the Agricultural Loans

Act, and a sum of one lakh of rupees for loans under the Land Improvement Act. Of this latter sum, Rs. 85,162 was distributed up to January last. Rs. 10,000 have been sanctioned for giving employment in digging tanks, and Rs. 30,000 will be expended in repairs to the Kutubdia embankment during the remainder of the current financial year 1897-98. Relief has also been given in the shape of remission of tolls on timber and thatching-grass for building houses."

REMISSION OF FOREST TOLLS.

The Hon'ble BABU SURENDRANATH BANERJEE asked—

Will the Government be pleased to state whether the facts, stated in the Chittagong newspaper *Jyoti*, in its issue of the 27th January, with respect to the partial remission of forest tolls, are correct? What loss of revenue has Government suffered by the remission of half the rates of these tolls on building materials for two months as compared with the average of the previous three years? Whether February and March are not the two months when bamboos, canes, and especially thatching-grass are largely brought down from the hills and when the houses are usually re-built, and whether the period of remission will cover these two months?

The Hon'ble MR. FINUCANE replied:—

"Government has not before it a copy of the newspaper *Jyoti*, which, it is understood, has been recently started, and is not aware what the alleged facts referred to by the Hon'ble Member, are. Under a Government order of the 6th November, the tolls on grass, bamboos, canes and certain kinds of timber taken from the Government forests in Chittagong were reduced to half rates for the period of two months, a concession which, as regards timber, was, at the instance of the local officers, extended by an order of 11th January for two months more in the areas affected by the storm-wave, i.e., in Jaldee, Chakaria, Kutubdia, and Moheskal, and for one month as regards thatching-grass in the three southern tehsils. The loss to Government on account of the reduction of the forest tolls to half rates is estimated at about Rs. 25,000."

The Hon'ble BABU SURENDRANATH BANERJEE asked—

Whether any loss that Government is likely to suffer by this remission of half the rate of tolls is not likely to be wholly or partially recouped by the considerably larger importations of building materials due to the wholesale destruction of houses by the cyclone?

The Hon'ble MR. FINUCANE replied:—

"It is anticipated that the loss to some extent may be recouped in the way suggested in the Hon'ble Member's question."

STATEMENT OF THE COURSE OF BUSINESS.

The Hon'ble The President said:—"In welcoming the members back to work, I must preface what I have to say as to the business likely to be brought before them by extending a hearty greeting to the new members who have joined the Council since it last met. I trust that the Council will maintain its old reputation of being a business-like and practical body, where more weight is attached to experience and brevity than to lengthy speeches, however able and interesting.

"The first measure that I must mention is the Bill for amending the Bengal Tenancy Act. The opinions of the officers and Associations that were consulted upon the Bill as introduced were duly received. A good deal of opposition was raised by the Landholders' Associations and by Judicial officers to the proposal to abolish the Civil Procedure Code in the settlement of rents of permanently-settled estates, and to confer on the Revenue authorities the power of finally determining what are fair and equitable rents in such estates.

On considering these objections, I addressed the Government of India in the following terms:—

‘The Government of India are aware that one of the Lieutenant-Governor’s main reasons for making the proposal to withdraw the judicial procedure in the settlement of rents both in permanently-settled and temporarily-settled estates was that the observance of that procedure was thought to be cumbrous, dilatory and unnecessarily expensive.

‘When a settlement of revenue is undertaken in temporarily-settled estates in Bengal, fair rents must be settled for all tenants of all classes, whether they or their landlords apply for a settlement of rents or not, the fair rents so settled being made the basis of the revenue demand, and the entire cost of such settlement being borne by Government. For this reason the adoption of a cumbrous and dilatory procedure entails unnecessarily large expenditure by Government; and it was partly with a view to remedy this evil that Sir Charles Elliott suggested, and Sir Alexander Mackenzie accepted the suggestion, to transfer the settlement and final determination of fair rents in temporarily-settled estates to the Revenue authorities, and to substitute for the Civil Procedure Code in the settlement of rents the procedure proposed in the Bill introduced in the local Legislative Council. His Honour thought that the procedure proposed by him would be less expensive and more efficient than that proscribed in the Bengal Tenancy Act. But as it had been conceded at the time the Tenancy Act was passed that Government claimed no facilities for the enhancement of rents in its own estates, or in estates under settlement of revenue which it was not prepared to give to proprietors of permanently-settled estates also, Sir Alexander Mackenzie thought it right to offer to these proprietors the same methods and procedure for settlement of rents in their estates that he proposed for adoption in Government and temporarily-settled estates.

‘As, however, the proprietors of permanently-settled estates prefer the Civil Procedure Code and the method of settling rents prescribed in Chapter X of the Bengal Tenancy Act as it stands, the Lieutenant-Governor sees no reason to press on them against their consent what he believes would be a more efficient and less expensive procedure. In permanently-settled estates rents are settled only on the application of the parties concerned, who have to pay the cost. If they prefer the more expensive procedure proscribed in the Act with the guarantees which they think are afforded by appeals to the Judicial instead of to the Revenue authorities, there is no reason why their opposition should be courted by forcing on them a more summary and less expensive method of settling rents.

‘As regards Government and temporarily-settled estates, the case is different. In the first place, as already remarked, rents have in these cases to be settled on a great scale at the expense of Government, and Government alone suffers the loss entailed by dilatory proceedings; in the next it has always been admitted that Government is the sole arbiter of the amount of land revenue which may be equitably demanded; and as that amount depends on the amount of the rents or assets on which it is based, it necessarily follows that the superior Revenue authorities and not the Civil Courts should be the final authorities for the determination of fair rents where a settlement of revenue is being made or about to be made; and lastly, there are indications in the reports received that while the High Court and the Landholders’ Associations are strenuously opposed to the transference to the Revenue authorities of the final determination of fair rents in the case of permanently-settled estates, there would certainly be less and possibly no serious opposition to such transference in the case of estates under settlement of land revenue.

‘For these reasons His Honour the Lieutenant-Governor proposes to adhere to the principles of the Bill for the settlement of rents and decision of disputes as regards areas under settlement of land revenue, and to adopt the principles of Chapter X of the Act as it stands in the settlement of rents and decision of disputes in the case of permanently-settled estates, while at the same time removing the doubts and difficulties which have arisen in the interpretation of that chapter owing to conflicting or erroneous judicial decisions. The Lieutenant-Governor also proposes, as regards temporarily-settled and permanently-settled areas alike, to adhere to the amendments in the substantive law relating to the enhancement and reduction of rents already approved by the Government of India.

‘If the Supreme Government accept these proposals, His Honour would briefly explain them in referring the Bill to a Select Committee, and leave the Committee to formally embody them in the Bill.’

“Scarcely had that letter issued when the following letter was received from the British Indian Association:—

‘Dated Calcutta, the 11th January, 1898.

From—RAI RAJ KUMAR SARVADHIKARI BAHADUR, Secretary, British Indian Association,

To—The Secretary to the Government of Bengal, Revenue Department.

In continuation of my letter No. 283, dated 11th June 1897, containing the opinion of the Committee of the British Indian Association on the provisions of the Bill to amend the Bengal Tenancy Act which is now before the Bengal Legislative Council, I am directed by the Committee to state that they have reconsidered their representation to Government regarding the proposed procedure for the settlement of rents, the withdrawal of the jurisdiction of the Civil Courts in the matter, and the vesting of such jurisdiction in the Revenue authorities. Since my letter was forwarded to you, the Committee have had the advantage of receiving important communications on the subject from several mufassal members of the

Association, who are of opinion that the proposal for the alteration of the procedure for the settlement of rent, and the transfer of the right of appeal on questions relating to the fixing of rents from the Special Judge to the Revenue authorities, has much to commend it, and that they are inclined to think that the proposed change will be an improvement upon the existing procedure. My Committee have carefully reconsidered the question in the light of the facts and arguments placed before them by the mufassal members of the Association, with the result that their views have undergone considerable modifications. Under the circumstances, the Committee are of opinion that they will best serve the interests of the class they represent by withdrawing the objections advanced in paragraph 4 of my letter, to which reference has been made above. They submit that private landlords should be in the same position as the State, and that the procedure proposed for the settlement of rents in Government estates should be open to all private landlords.

'If, however, the Government does not see its way to adhere to the original principle of the Bill in its entirety, the Committee would venture to suggest that, in cases where the settlement of the rate of rent is likely to affect a large area or the interests of the majority of the raiyats in a village, it shall be incumbent upon the Civil Court to refer such cases to an experienced Revenue officer for local investigation and report, and that the finding of the Revenue officer on the question of liability to enhancement and on the rate of rent be made binding on the Civil Court. What the Committee desire is that the Civil Court shall adjudicate in accordance with the report of the Revenue officer, and that appeals from the Civil Court shall be disposed of by the Special Judge who may be appointed for the purpose.'

"Satisfactory in one way as this change of front is, I thought it did not do away with the weight of adverse opinion originally received, and I informed the Government of India that I adhered to my letter above quoted, but would leave the Select Committee to discuss the proposal in the last paragraph of the Association's letter. The Government of India and the Secretary of State have accepted my suggestion, the Government of India remarking:—

... while the Government of India have accepted the recommendations of the Government of Bengal, they fear that they may not prove to be in the best interests of landlords and tenants, and believe that both classes will eventually recognize that this is so.

'The principal ground for the change of policy was the opposition of the landlord class to the executive fixation of rents. There is no reason why the interests of Government should be prejudiced on this account, and the amended Bill should provide for the retention of the procedure for executive rent adjustment in the case of all Government estates as well as in the case of temporarily-settled areas under settlement.'

"The Secretary of State's Orders are—

'I have no objection to proposed compromise, provided original Bill is maintained as far as concerns temporarily-settled tracts during settlement.'

"We have recast the Bill accordingly. The measure, as originally introduced will be referred to a Select Committee which will be invited to recast the Bill on the lines now approved by higher authority.

"Correspondence has been going on between this Government, the Government of India, and the Government of the North-Western Provinces with reference to certain proposed amendments of the Court of Wards Act. I am not, however, yet in a position to explain the scope of the intended legislation. I hope to have the preliminary discussions finished in time to introduce the measure some time this session. One main object of the Bill will be to place persons with a life interest only, or holding as executors, administrators, or trustees, on the same footing as beneficial owners so far as the Court of Wards is concerned. It is anomalous that a person who would be disqualified if he were a beneficial owner, should be treated as qualified if he be an executor or trustee.

"Passing from the Land Revenue to the Municipal Department, we hope to lay before you very shortly an elaborate Bill for reforming the Municipal Law of Calcutta.

"The necessity of legislation was originally urged upon us for the purpose of enabling the Commissioners to recover license tax from certain companies which now escape payment, and in order to supply an omission in section 237 of the Act which renders it impossible for the Corporation to exercise effective control over alterations in buildings. Since the amendment of the law with regard to these points was decided on, facts were brought to light in connection with the alarm of plague in Calcutta, which showed that the present constitution of the Municipality is ill-adapted to stand the strain of a grave and sudden emergency, and fails to secure the prompt and continuous executive action which is necessary in view of the fact that the sanitation and

conservancy of the great Indian maritime cities has now become a matter of international concern. In point of fact under the present law there is no Municipal constitution at all in the proper sense of the word. Everything is fluid and indefinite. The Act vests in the Commissioners all powers whether they are such as a large deliberative body can properly exercise or not; but it allows the Chairman to exercise all the powers vested in the Commissioners, except those reserved to the Commissioners in meeting, subject to such limitations and conditions as may be imposed, before or after he has acted under this power, by a resolution of the Commissioners. It further confers an unlimited power of controlling the Chairman by the action of Committees. By thus failing clearly to define the powers of the Executive, the Act renders it impossible to say as regards any given matter in what part of the Corporation the Executive resides or indeed whether there is any Executive at all. The consequences have been what might have been expected—a complete breakdown of the conservancy of the town at a critical period and serious confusion in many other departments of the municipal administration, without the possibility of determining with any approach to certainty where the responsibility for such a state of things lies.

“It was felt that it would be unfair to the Commissioners as a body, no less than to the Chairman and the heads of the Departments under him, to expect them to carry on the administration of the city under the altered conditions arising from the danger of the plague and the threatening attitude of European powers with a machinery so ill-adapted for its purpose, and the Government of India have accepted the opinion that material changes in the municipal constitution of Calcutta are called for. The proposals of this Government which were embodied in a provisional sketch of the amended law have been submitted to the Secretary of State, and as soon as his sanction is received, a complete Bill which is now under preparation will, after receiving the formal sanction of the Government of India, be introduced into this Council. I may mention that I found, when at home on leave, that a keen interest is taken in this measure by the Secretary of State personally, by the commercial community at home and many Home authorities, who consider that a reform is called for without unnecessary delay. My proposals have met with the general approval of the Government of India. We are awaiting the orders of the Secretary of State (telegraphic intimation of his assent has just been received), and we shall then do our best to get the measure passed after a reasonable amount of discussion and consideration. The Bill is a large and, I hope, very complete measure, and deals with all branches of the administration of the city. It leaves untouched the number of Commissioners and the existing methods of electing and appointing them. While it reforms the procedure for election, which is admitted by every one to be defective, it does not alter the franchise, nor does it reconstruct the present arrangement of wards. It provides the Corporation with an efficient executive and interposes between the main body of the Commissioners and the Chairman a working Committee of twelve, elected and appointed so as to represent the three chief interests in Calcutta—the Government, the commercial community and the residents. We have made use of the experience of Bombay which Mr. Risley was specially deputed to examine on the spot. The functions of the three Municipal authorities—the Corporation, the General Committee, and the Chairman—are precisely defined and carefully distinguished. To the Corporation is reserved the power of fixing the rate of taxation, of passing the Budget and of deciding all the large issues which can properly be discussed by a deliberative assembly of 75 members. The Chairman, as in the Bombay Act, is vested with all executive power, to be exercised, as is laid down in each case, either independently or subject to the approval or sanction of the Corporation or the General Committee as the case may be. The General Committee as the working body of the Municipality stands between the deliberative and Executive authorities and deals with those matters which by their nature are ill-adapted for discussion by the Corporation, and yet are too important to be left to be disposed of by the Chairman alone. Power is taken for the General Committee to appoint Sub-committees, on which I hope to see all the real workers among the Commissioners utilised. When the Bill is introduced and referred to a Select Committee, the distribution of powers between the Municipal authorities will be a

matter requiring careful discussion, but there can be no doubt that the principle of distributing powers somewhat in the manner proposed is essential to the smooth and efficient working of the municipal constitution.

"One great advantage from the proposed change in the constitution is that I have reason to believe that the European community of Calcutta will, if it is accepted, no longer stand aloof from the Corporation, acting generally as hostile and not always well-informed critics, but will (as Kristo Das Pal hoped in 1876) take their fair share in municipal work and responsibilities.

"The remaining provisions of the Bill are of less general interest, and will be explained when the measure is introduced. Mr. Risley has been for some weeks past on special duty in connection with the Bill, preparing it Chapter by Chapter in communication with our Assistant Secretary and other competent advisers for my orders. I have been over it again and again section by section, and it is in my judgment a measure which will be welcomed by all who have at heart the interests of Calcutta and the trade of Upper India.

"The Bill embodies such of the suggestions of Mr. Justice Trevelyan's Building Commission as could properly come within the scope of a Municipal Bill, and I take this opportunity of heartily thanking Mr. Trevelyan and his colleagues for the time and trouble they have bestowed on the important matters referred to them.

"The question of opening up the unhealthy and congested areas in Calcutta, in some of which 75 per cent. of the space is occupied by solid masonry, is a very difficult one and no attempt has been made to deal with it in this Bill. A well-considered scheme for meeting a similar difficulty is now under discussion in Bombay, and a Bill for giving effect to it has been introduced into Council there. It seems probable that whatever action may be taken hereafter in Calcutta will have to proceed on the same general lines, that is to say, a special Commission or Trust will have to be formed, and funds will have to be placed at their disposal. Where are the funds to come from? In Calcutta there is no land for the Government to make over for the Trust to manage and improve and thus convert it into a valuable asset on the security of which money may be borrowed and applied to the formation of new streets. The only alternative seems to be the imposition of some tax which might be administered by the Trust and might form the basis of their financial operations. Several suggestions of this kind have been made by the Building Commission presided over by Mr. Justice Trevelyan, the report of which will be published as soon as the Municipal Bill is introduced into Council. Each of these suggestions raises large economic questions on which wide differences of opinion may exist, but there can be no doubt that unless some means of raising funds can be devised, the prospect of improving the congested areas of Calcutta must be indefinitely deferred.

"Then we have a Bill to amend the Excise Act. The Bill has been approved of by the Government of India subject to certain modifications which we have now referred to the Board of Revenue. It ought to be ready for introduction by July.

"The existing Excise Law [Bengal Act VII of 1878] has been in force for nearly 20 years, and like most measures of that kind, which deal with administrative arrangements liable to change from time to time, stands in need of amendment on a variety of points, some of which have been met by the amending Acts IV of 1881 and I of 1883. The main objects of amending it at the present time are to carry into effect the policy adopted by the Local and Imperial Governments in respect of—

- (1) the introduction into Bengal of the Madras system of levying a revenue on tari by taxing the trees tapped for the purpose of drawing tari for sale as an intoxicant;
- (2) the export of exciseable articles, including ganja, on payment of excise duty; and
- (3) the improvement of the provincial system of excise in regard to hemp drugs in accordance with the recommendations of the Indian Hemp Drugs Commission in so far as they have been accepted by the Government of India.

"The opportunity has been taken of consolidating and re-arranging its provisions so as to follow the general form and arrangement of the Excise Act, 1896. After introduction the Bill will be circulated for the opinions of district officers and public bodies.

"Next there is the Bill to amend the Salt Act. This Bill was published on the 17th July last under Rule 34 of the Council Rules and was circulated for opinion. All the opinions but one (that of the Indian Association) have been received. The objects of the Bill are as stated in the first paragraph of the Objects and Reasons. The necessity for taking power to control the possession of salt-earth was forced upon us by the discovery of the existence in the 24-Parganas of an elaborate system of manufacturing illicit *panga* salt for sale, involving a loss of revenue which is estimated by different observers at 2 lakhs and 6 lakhs a year. There is also some reason to believe that illicit manufacture of the same kind exists, though not on so large a scale, in parts of Midnapore. The Bill has been circulated, and the opinions received, which are on the whole favourable, are being considered. It is probable that some of its provisions may be modified with the object of making it more clear that it is directed at the manufacture of illicit salt in large quantities for sale and not at petty domestic manufacture for family consumption.

"Although the Bill has not yet passed into law, we resumed charge of the salt administration of Orissa on the 1st October last, and the Salt officers there are working under the Collectors there in accordance with the provisions of Act XII of 1882, the Northern India Salt Act, which is in force.

"In the other saliferous tracts Bengal Act VII of 1864 is still in force. This does not recognise Salt officers as such, and gives all powers to the Police. It would be possible of course if the passing of our Bill were long delayed to extend Act XII of 1882 to the coast districts, but I hope we shall be able to get our own Bill through very shortly.

"I may perhaps refer to the Bill to amend the Local Self-Government Act. This was drafted to enable District Boards to start veterinary dispensaries and pay veterinary doctors. In the hot weather of 1896 it was expanded into a measure legalising permissive local taxation for water-supply and village sanitation and providing for tolls on bridges. Opinions were collected, and in October 1896 the Government of India communicated certain criticisms.

"We cannot, however, proceed with the Bill at present, as it is understood that the Government of India has under consideration a new set of arrangements affecting Provincial and local finance, but I hope that the measure will not be lost sight of. The necessity of improving the water-supply and sanitation of villages is generally admitted, and District Boards are at present suffering from the inexpansive character of their revenues under all heads except that of road cess, which increases but very slowly as revaluations are made. The only means of giving them relief is by vesting them with certain powers of permissive local taxation for purposes of local interest and importance such as water-supply, sanitation, education and medical relief.

"A further reason against proceeding with the Bill at present is that a proposal is before the Government of India for reorganising the Public Works and District Works establishments in Bengal.

"In the Judicial Department we have a short Bill for extending to the Town and Suburbs of Calcutta, with such modifications as are required by local circumstances, the provisions of sections 15, 15A and 16 which were inserted by Act VIII of 1895 in the Police Act, V of 1861, together with portions of other sections of a subsidiary character.

"The sections in question authorize (a) the quartering of additional police in areas which are in a disturbed or dangerous state, and the recovery of the cost from the inhabitants, and (b) the award of compensation to sufferers from misconduct of the inhabitants of such areas. They do not at present apply either to Calcutta or the suburbs thereof, for which there are special Police Acts (viz., Acts IV and II of 1866, passed by the Bengal Council), and the riots which occurred in the Northern Division of Calcutta in June and July last have suggested the desirability of introducing them into these areas, to be ready for use in case of need. Provisions similar to section 15 of the Act of 1861 (as to the quartering of additional police in a disturbed area at the cost of the inhabitants) have been enacted also for the City of Madras by Madras Act

III of 1888, sections 20 and 22, and for Bombay districts by Bombay Act IV of 1890, sections 25 and 26. The necessity of this measure was brought out in connection with the Tallah riots, and it has been sanctioned by the Government of India.

"Mr. Wigley has also kindly drafted for us a General Clauses Bill which has gone to the Government of India for approval. The Bill follows the General Clauses Act passed by the Supreme Council last year, and it is necessary because (1) that Act applies only to laws passed by the Supreme Council, and (2) the General Clauses Act of this Province [V (B.C.) of 1867] contains but a very small number of definitions. Each Province should have a General Clauses Act on the lines of the Government of India's Act of last year dealing with the Acts of its Council."

AMENDMENT OF THE BENGAL TENANCY ACT, VIII OF 1885.

The Hon'ble Mr. FINUCANE moved that the Bill to amend the Bengal Tenancy Act, 1885, be referred to a Select Committee consisting of the Hon'ble Rai Durga Gati Banerjea, Bahadur, the Hon'ble Mr. Pratt, the Hon'ble Mr. Toynbee, the Hon'ble Norendra Nath Sen, the Hon'ble Saligram Singh, the Hon'ble Maharaja Bahadur Sir Luchmessur Singh of Darbhanga, and the Mover.

The HON'BLE BABU SURENDRANATH BANERJEE said:—"Now that the motion has been made that this Bill be referred to a Select Committee, the time has come when under the rules of the Council the principle of the Bill may be discussed, and those principles, I may observe, are of the greatest possible importance in a country like Bengal, with its teeming agricultural population. But apart from its intrinsic importance, the Bill raises collateral issues which deserve serious consideration. The Bill may be divided into two parts—the first part has reference to what may be called the 'prevailing rate' clauses of the enhancement sections which purport to afford facilities to zamindars to enhance rents. The second part raises issues of a still graver character. It practically repeals Chapter X of the Bengal Tenancy Act and substitutes for it provisions which cannot but lead to considerable discussion and controversy, and which, I am afraid, will be considered in some quarters as being retrograde and reactionary in their character. With reference to the first part of the Bill—I would refer to section 30 of the Bengal Tenancy Act. The section lays down the conditions under which zamindars may enhance rents, and clause (a) provides that when a tenant holds land at a rate lower than the prevailing rate for land of the same description in the same village that constitutes a ground of enhancement. It is now proposed to alter the law and substitute the words 'adjoining or neighbouring village' for the words 'same village.' That was the law before 1885. The law then was much more elastic, and afforded wider facilities to zamindars for purposes of enhancement. But in 1885 the law was amended, and, as I have said, for the words 'adjoining or neighbouring village' the words 'the same village' were substituted, thus imposing a restriction upon the power of enhancement possessed by zamindars. It is now proposed to place zamindars in the same position in which they were before 1885. If the present law is a real hardship to zamindars, if it operates as an injustice, I would not be understood as standing in the way of the removal of a real grievance. At any rate this is a matter we ought to consider, and I have not the slightest doubt that it will be carefully considered by the Select Committee to whom the Bill will be referred. Then as regards the second point to which Your Honour has referred in your opening statement, I desire to call the attention of the Council to an observation which the Hon'ble Member in charge of the Bill made in introducing the Bill into Council. He said it was no part of the intention of the authors of the Bill in any way to interfere with the jurisdiction of the Civil Courts or the jurisdiction by way of appeal to those courts which is conferred by the existing law. As far, however, as I can see, I hold that the modifications which this Bill proposes will have the effect of curtailing to a very serious extent the jurisdiction now vested in the Civil Courts. Under the existing law the matters which are referred to in Chapter X are matters which are disposed of by the Revenue authorities in accordance with the forms of judicial

procedure. In the exercise of their functions under this chapter, such officers are to all intents and purposes judicial officers. Against any orders passed by them an appeal lies to the Special Judge, who for the most part is a Covenanted Civilian of the rank of a District Judge; and there is a further appeal to the High Court. Now all this is altered under the Bill. The Revenue officers will not be guided by the provisions of the Civil Procedure Code; they will act in accordance with rules laid down by the Government, but not necessarily subject to the procedure of the Civil Courts, those rules being in the nature of instructions issued by the executive authority of the Government and subject only to its discretion. Again, the appeals against the orders of the Revenue authorities will be preferred no longer to the Civil Courts or the Special Judge, but to higher Revenue authorities. The procedure will be summary, and the tribunal will not be a judicial tribunal; and the appellate authority of the High Court, as I read the Bill, will also be curtailed."

The HON'BLE MR. FINUCANE said:—"The provisions of the present law both as to appeals to the Special Judge and to the High Court remain in the revised Bill exactly as they are now in respect of permanently-settled estates."

The HON'BLE SURENDRANATH BANERJEE said:—"The revised Bill has just been laid before us, and I have not had time to study its provisions."

The HON'BLE THE PRESIDENT said:—"As regards permanently-settled estates, things will remain practically as they now are, except for a slight shortening of the procedure to make it more simple and expeditious. As regards temporarily-settled estates and estates directly under Government, we intend to adopt a new procedure."

THE HON'BLE SURENDRANATH BANERJEE said:—"That limits the scope of the Bill; but having regard to the sympathy which the Government showed for the peasantry of the country when the Tenancy Act was passed in 1885, when it modified the summary procedure, it does not seem to me that a case has been made out for the resumption of the powers which it parted with in 1885. I thankfully admit that the scope of the Bill has been restricted, but as regards the Government and its tenants, I say with great deference that the Government having deliberately given up the right which it possessed of a summary procedure between itself and its tenants, no case has been made out for the resumption of the powers which it abandoned of its own will in 1885. I must say that I cannot express any sympathy with the letter which Your Honour read as having been received from the British Indian Association in which they have withdrawn from the position which they formerly maintained in condemnation of this summary method of procedure. I think the judicial procedure is best suited to the circumstances of this country, and that procedure ought to be continued. I have one other remark to make. This Bill provides—I speak subject to correction—for a table of rates. I desire to record my humble protest against the adoption of any such table. There are distinguished Revenue officers in this Council, and I ask them whether it will be possible for Revenue officers to look carefully into these rates. They will involve the inspection of every piece of land in the village, and I ask whether it is within the range of practical politics for the Revenue officer to go from field to field to satisfy himself that the rate which is to be fixed is a fair and correct rate? The practical result will be that the fixing of the rates will be left to the *amins*, and we all know what that means. One of the worst-paid class of public servants, their financial exigencies too often put a very severe strain upon their honesty. It is, therefore, most undesirable to add to the powers which they possess. These are the observations which I desire to submit for the consideration of the Council and the Select Committee, and I hope and trust that when the Bill emerges from the hands of the Select Committee, it will be so modified and revised that it will commend itself to the approval and judgment, not only of this Council, but of the country at large."

THE HON'BLE BABU KALI CHARAN BANERJEE said:—"I think it my duty to take exception, at this stage, to the principle of the Bill, even with the modifications which, we are now informed, have been introduced into it. What I feel

is that the principle of the Bill, in certain contexts at any rate, is tainted with the tendency, observable of late, to neutralise the judicial control of the High Court, in the interests of Revenue officers who think they are hampered in the discharge of their functions by such judicial control. In paragraph 3 of the Statement of Objects and Reasons, in connection with the Bill, certain complaints are made on behalf of Revenue officers. Now, these complaints are nothing more or less than complaints against certain decisions of the High Court, in which it was held that Revenue officers had no jurisdiction in certain matters in which they would fain have jurisdiction, and the object of the Bill is, as we have it in the opening clause, 'to clear up doubts and difficulties.' Those doubts and difficulties are cleared up by expressly conferring on Revenue officers jurisdiction in matters in which, as the present Act is interpreted by the High Court, they have no jurisdiction, and should not have jurisdiction. But not only so. In certain contexts at any rate, as the Bill provides, Revenue officers are exempted from what, perhaps, they consider to be the trammels of certain provisions of the law under which the Civil Courts have to act. The assumption of summary jurisdiction by Revenue officers will entail an amount of hardship to tenants which it is impossible to overestimate, especially, coupled, as it is, with the provision that appeals from their decisions will lie to the superior Revenue authorities in an ascending scale. The poor tenant will hardly be in a position to challenge these decisions in the Civil Court, and, in most cases, they will remain unchallenged altogether; for he will have to wait all the time taken up in the decision of the lower Revenue authorities and the review of that decision by the higher Revenue authorities, before he can institute proceedings in the Civil Court; and the same litigation will have to be prosecuted twice over. This, I submit, will be a great grievance as far as tenants are concerned. Then, with regard to the settlement of rent, it has already been observed, and I may repeat, that no principle of any kind has been laid down for the guidance of the Revenue officers. In the last clause of the section bearing on it, there is a reference to certain principles regarding the enhancement of rent, but they involve a cumbrous procedure, and as the preceding clauses provide a readier procedure, it is not difficult to imagine which of these procedures will be availed of by Revenue officers for the settlement of rent. Practically, it will be based on no appreciable principle, and rent will have to be settled more or less arbitrarily. It may be said that, sometimes, matters are disposed of more readily, if we adopt what may be described as the patriarchal system, but that is a system which can be worked by patriarchs alone, and not by young and inexperienced Revenue officers. One remark more, and that with regard to the definition, proposed to be introduced, of the term 'prevailing rent.' The definition is very obscure, and what is more, it will be unworkable, and lead to consequences detrimental to the interests of tenants. A new principle has been introduced in the definition of 'prevailing rent.' Instead of understanding the expression in the sense of rent paid by the majority of tenants, section 4 of the Bill amending section 31A provides that 'the highest of such rates at which and at rates higher than which a larger portion of those lands is held than is held at lower rates may be taken to be the prevailing rate.' It very often happens that in a village, a large portion of the land is held by a single individual. Some one in favour with the landlord may help the landlord to bolster up the rate of rent. But that is not all. Having regard to the procedure in the Civil Court, it will be impossible to ascertain the prevailing rent according to this method. When the tenants are examined, although they may be in a position to say what their rents are, they are often ignorant of the area of land comprised in their holdings, and it will be next to impossible for the Courts to ascertain the prevailing rate of rent according to this definition. The matter is not made at all clearer, while there is danger of rents being fixed arbitrarily, which will be disastrous. It may be said that there is a provision in the Bill for instructions from the Local Government to Revenue officers in the matter of the settlement of rent, and that they may be expected to settle rent in accordance with those instructions; but I venture to say that such instructions may not have anything like consistency or continuity of principle characterising them, and as not open to inspection by the people, will strike the public as charged with a periodic element of variance. For these reasons, I oppose the principle of the Bill."

The Hon'ble Mr. FINUCANE said:—"I shall reply very briefly to the observations which have been made upon the principle of this Bill, and first of all I may say that I understand that the two Honourable non-official members, who have addressed the Council, have spoken in the interests of raiyats. I congratulate them and the Council on the fact that there are some Honourable elected Members who speak on behalf of raiyats and look after their interests, and from that point of view they have my entire sympathy. But I think the conclusions to which they have come are based on a misapprehension of the Bill as it is now proposed to modify it. As I have already said, it is not proposed to alter the present procedure, or to abolish the Civil Code Procedure in the settlement of rents in permanently-settled estates, which comprise more than 90 per cent. of the whole of the estates in Bengal. With reference to them, there is absolutely no change proposed in the jurisdiction of the Civil Courts, appeals being heard by the Special Judge and High Court exactly as at present. In the case of all other estates, that is to say, temporarily-settled and Government estates where questions of right, title and the like arise in connection with the settlement and preparation of a record-of-rights, not only is the jurisdiction of the Civil Courts not curtailed, but it is actually extended. It is left to the parties to move the Civil Courts on all questions except the amount of a fair rent. There is no appeal to the High Court under the present law in respect of questions of rent, the Special Judge giving the final decision, and there is to be no appeal to the High Court on the question of amount of a fair rent under the Bill. Therefore, I say that the idea that the jurisdiction of the Civil Courts is interfered with is without foundation. Then as regards the prevailing rate, I explained, when I introduced the Bill, the reasons that have influenced the Government in extending the area of comparison, and I don't think it necessary to reiterate what I then said. The Hon'ble Member who spoke last said that the procedure for ascertaining a prevailing rate will be unworkable; I can only say that the object is to make it possible to find what the prevailing rate is, where there is one at all. At present it is said that it is illusory to give zamindars the prevailing rate as a ground of enhancement of rent, when, in fact, it can nowhere be worked as a ground of enhancement. If any Honourable Member will suggest a more workable definition than that proposed in the Bill, I feel sure that the Government will be very glad to consider it. The Courts have held that the prevailing rate is a uniform rate paid by the majority of tenants in a village. Such a thing as a uniform rate paid by a majority of the tenants in a village does not generally exist even where rates do exist and are recognised, and therefore it is necessary to have some sort of definition, such as we here propose, if the prevailing rate is to be worked at all. The only other point on which any remarks have been made is regarding the proposed table of rates. It is said that a table of rates cannot be made; that it is impossible for a Settlement or Revenue Officer to prepare such a table. But I would point out that the section is permissive merely, as it says that if the Revenue Officer finds it practicable to do so, he may prepare a table of rates. If it is not practicable, he will not attempt to prepare a table. In some parts of the country it is practicable; where it is not a table of rates will not be framed. It has been said that no principle has been laid down in the Bill for the settlement of rents. Rents in permanently-settled estates are only to be enhanced on certain grounds which are distinctly specified in the law; as regards estates which are temporarily-settled and Government estates, three or four systems are laid down under which all or any of the Revenue officers may act. I think Honourable Members, when they examine the revised Bill, will be satisfied that it is not so very dangerous a measure as they think, and I hope that when it emerges from the Committee, it will meet with the approval of the Council."

The Hon'ble The PRESIDENT said:—"I hope Honourable Members will study with very considerable care the provisions of this Bill which relate to the question of the prevailing rate, and I hope they will carefully read the papers which have been sent up with regard to the Bill, and that the deliberations of the Select Committee will result in evolving a satisfactory measure. It is an extremely difficult subject, I admit. The papers relating to this Bill were sent out to me when I was on my way out from home, and having nothing to do, I

carefully studied them on board, and came to the conclusion that it would be better not to interfere with the procedure prescribed by the existing law with regard to permanently-settled estates. Both the Government of India and the Secretary of State have accepted that view, and they have equally accepted the view that as regards Government estates and other temporarily-settled estates, the law should be in Bengal as it is in other parts of the country; and as regards such estates, I think the Council will not be wrong in accepting the proposals which are put forward in the Bill now before the Council."

The Motion was put and agreed to.

AMENDMENT OF THE POLICE ACT, V OF 1861.

The Hon'ble Mr. Pratt moved for leave to introduce a Bill to extend certain portions of the Police Act, V of 1861, to the town and suburbs of Calcutta.

He said :—

"I move for leave to introduce a Bill to extend certain portions of Act V of 1861 to the town and suburbs of Calcutta. The power of quartering additional police in disturbed areas at the expense of the inhabitants was conferred on the Local Government by section 15 of Act V of 1861 as originally passed. That section was recast by Act VIII. of 1895, and a clause was added empowering the Local Government to exempt any person or class of persons from liability to bear any portion of the cost of such extra police. By section 15A of this latter Act an important provision was introduced whereby any inhabitant of an area proclaimed as being in a disturbed or dangerous state might recover compensation from the inhabitants of that area for damage to property or for grievous bodily injury. The circumstances of the riots which occurred at Chitpur and in the northern parts of Calcutta on the 30th of June and the 1st of July last, must still be fresh in the memory of Hon'ble Members of this Council. On that occasion His Honour the Officiating Lieutenant-Governor considered the question of quartering additional police in the disturbed parts of the town at the expense of the Muhammadan inhabitants; but when a reference was made to the Advocate-General and myself as to the legality of any such action, we gave it as our decided opinion that Act V of 1861 does not apply to Calcutta and its suburbs, and that the proposed expedient was therefore not possible.

"And we gave our opinion in the form of the joint memorandum in my hands. It is a somewhat lengthy opinion; I therefore do not propose to read it to you *in extenso*, but will only state the substance. Act V of 1861 never did apply to the town of Calcutta. If Honourable Members will refer to that Act, they will see that it applies to what is described as the 'General Police District' under the control of an officer called the Inspector-General of Police and his Deputies. Now, by Act XIII of 1856 of the Supreme Council, which was repealed by Act IV of 1866 of this Council, the police of Calcutta were placed under the control of an officer called the Commissioner of Police, who still occupies the position given to him on that occasion. With reference to the suburbs of Calcutta, no doubt Act V of 1861 did apply to them at the time it was passed, but subsequently by Act II of 1866 the suburbs were excluded from the provisions of that Act by a notification issued under section 1 of that Act. There the matter would have rested were it not for the introduction in section 15 of the Act as amended by Act VIII of 1895 of the words 'any area subject to its authority.' At first sight it would seem that that expression was wide enough to include Calcutta and its suburbs, but as a matter of fact, the Act nowhere repeals the special enactments to which I have referred, and to this day the Commissioner of Police exercises control both over the town and suburbs of Calcutta. And when we examine how those words came into the section, we find that they were brought in simply to make the language of the first sub-section uniform with that of sub-sections (2) and (3). As a matter of fact the draft Bill presented to the Supreme Council did not contain the words to which I have referred, and neither in the speeches in Council, nor in the report of the Select Committee is there the slightest allusion to the reason for changing the language employed. Thus by reference to the general scope of the Act and the history of Act VIII of 1895, we came to the decided

conclusion that Act V of 1861 extends neither to the suburbs nor the town of Calcutta.

"Now the Bill which it is desired to introduce is in itself a small measure, having for its object the removal of an anomaly whereby the Local Government is debarred from using in the metropolis the resource of quartering extra police on the inhabitants of a disturbed locality. The power to take such action already exists with respect not only to all rural areas, but also to the great cities of Northern India, and such large and populous towns as Patna, Gaya, Dacca and Howrah, the last of which is practically a suburb of Calcutta. Moreover, there is a similar provision as regards the city of Madras to be found in section 20 of Madras Act III of 1888.

"The causes which lead to agrarian disturbances, such as quarrels about *chur* land or rent disputes between landlords and tenants, may not be expected to find a place in Calcutta. But experience has shown, both in the case of last year's riots and in the serious riots at Sham Bazaar in 1891, that religious excitement in a populous city may quickly be fanned into a flame, spreading disaster and consternation far and wide. Outbursts of popular excitement are often sudden, and cannot generally be foreseen, and where, as in Calcutta, the population is mixed and comprises a large body of low Muhammadans employed at the mills and factories, there is necessarily a risk of occasional outbreaks of lawlessness. Apart from disturbances which arise from religious excitement or class animosity, there might possibly be an outbreak of persistent incendiarism, such as has been known to happen in some mufassal districts. Is it right or expedient that the arm of the Local Government should remain shortened so that it cannot use the same repressive and punitive measures for organized terrorism and crime in Calcutta, as it can in all other territories under its sway? I think there can be but one answer to this question, and I trust this Council will speedily provide the remedy by means of the enabling Bill which I now seek to introduce.

"The material sections of Act V of 1861, as amended by Act VIII of 1895, which should be extended to the town and suburbs of Calcutta, are sections 15, 15A, and 16, with some modifications to suit local circumstances. As regards the Town of Calcutta, an officer to be appointed by Government would assess and levy the cost of additional police and of compensation for injury, while the Magistrate of the 24-Parganas, who exercises jurisdiction over the suburbs, would perform those functions in the Suburbs. In sub-section (2) of section 16 the words 'All moneys paid or recovered under sections 13, 14 and 15 shall be credited to a fund to be called the General Police Fund,' and 'have been replaced by 'All moneys paid or recovered under section 15—as sections 13 and 14 are not extended under the Bill, and there is no existing General Police Fund for Calcutta and the suburbs, nor is it necessary to establish one for the purposes of this Bill alone. Finally, I would draw attention to the proposed omission from sub-section (1) of section 15A of the words 'being an inhabitant of such area.' Under the existing law, only residents of the disturbed area can be awarded compensation for injury from the misconduct of the inhabitants. Such a limitation seems hardly just for Calcutta, where a disturbed area would often be frequented by strangers on business or by persons passing through and who had received no warning of impending danger. Such was the case during the recent riots, and I need only instance the case of the two young officers travelling inoffensively on bicycles towards Dum-Dum, who were attacked on the Circular Road by an excited and insensate mob, and who might have been killed had it not been for the humane intervention of a Hindu mill-owner who afforded them a temporary asylum. With these observations, I move for leave to introduce the Bill."

The Motion was put and agreed to.

The Council adjourned to Saturday, the 19th March 1898.

CALCUTTA;
The 15th March, 1898.

F. G. WIGLEY,
Offg. Assistant Secretary to the Govt. of Bengal,
Legislative Department.

REPORT OF THE CALCUTTA BUILDING COMMISSION.

No. 1472M.—The 14th March 1898.—The following Report is published for general information.

H. H. RISLEY,
Secy. to the Govt. of Bengal.

REPORT
BY THE
COMMISSION APPOINTED TO CONSIDER WHAT AMENDMENTS ARE REQUIRED
IN THE
LAW RELATING TO BUILDINGS AND STREETS
IN
CALCUTTA.

PRELIMINARY.

The Commission was constituted by the Government of Bengal under Resolution No. 1973M, dated the 6th April, 1897, [1] the personnel being as follows:—

THE HON'BLE MR. JUSTICE TREVELYAN	President.
THE HON'BLE MR. H. H. RISLEY, C.I.E.	Members.
THE HON'BLE MR. J. G. H. GLASS, C.I.E.	...	...
MR. H. C. WILLIAMS	...	...
MR. A. J. HUGHES, C.I.E.	...	...
BABU KALLY NAUTH MITTER	...	...
BABU NALIN BEHARI SIRCAR	...	...
SURGEON-MAJOR H. J. DYSON	Secretary.
MR. W. BANKS GWYTHYR	...	...
MR. F. G. WIGLEY	...	...

On the 4th June, 1897, Mr. W. R. Bright was appointed to be a member *vice* Mr. Williams who had proceeded on furlough. Mr. F. Peacock acted as Secretary from the 6th May to the 30th June, 1897, during Mr. Wigley's employment on other work. There have been no other changes in the personnel of the Commission.

2. The duties of the Commission, as described in the Resolution of the 6th April, 1897, may be stated as follows:—

- (1) to inquire into the history and operation of the statute-law and bye-laws for regulating the construction of buildings, the formation of streets, and the protection of streets from encroachment, in Calcutta;
- (2) to ascertain in what particulars (if any) such law and bye-laws have proved defective;
- (3) to inquire whether new building regulations are needed for Calcutta, and, if so, whether a Building Act is necessary, or whether the case can be met by amending the existing law;
- (4) to consider whether different sets of building regulations are not desirable for different quarters of the town, looking to the local circumstances of the different areas;
- (5) if new building regulations be found necessary, to ascertain what changes in the existing law are needed, with special reference to—
 - (a) fixing the minimum width of public streets,
 - (b) limiting the height of houses in relation to the width of the streets on which they stand,
 - (c) controlling the construction of brick buildings on *bustee* lands,
 - (d) fixing the minimum size of courtyards within houses, and
 - (e) fixing the minimum space to be left between the backs of houses for the purpose of ventilation;

[1] Paper No 1 in Appendix I.

(Preliminary.)

(6) to consider to what extent the principles recognised in European enactments relating to town buildings require to be modified with reference to the soil, climate and rainfall of Calcutta, the prevailing diseases, and the habits of all classes of the population ;

(7) to inquire into the desirability of opening out congested tracts in Calcutta, and to ascertain the most feasible plan for opening out such tracts ; and

(8) to inquire whether the special circumstances of Calcutta call for any modification of the ordinary law of land acquisition.

Main object of Commission's inquiries.

3. The intimate connection between defective dwelling-houses and spaces and epidemic disease was mentioned in the Resolution, and reference was made to the spread of plague in Western India, to the extent to which overcrowding prevails in Calcutta, and to the fact that the method of construction of buildings in the older part of the town impedes or renders impossible any effective conservancy. It was, in short, mainly in the interests of the public health that the Commission was called into existence.

General directions to Commission.

4. As regards the direction, character and limits of their inquiries, the Commission were given a perfectly free hand. With reference to the opening out of congested tracts, the Commission were requested (with or without going into the details of any particular scheme of street improvement) to examine the general principles on which such operations ought to be conducted in order to make them financially as well as structurally successful. And it was explained that the issue which lies in fact at the root of the whole inquiry is to what extent and in what directions private rights may equitably be made to give way to public needs.

Directions as to earthquakes.

5. In consequence of the earthquake of the 12th June, 1897, which caused widespread damage to buildings in Calcutta, the Government of Bengal, in a letter dated the 21st *idem*,^[1] requested the Commission to consider whether any regulations should be framed with the object of rendering buildings in the City less liable to be damaged by earthquakes. Again, in a memorandum dated the 9th August, 1897,^[2] the Commission were requested by the Government to consider the question of amending the law so as to provide for the possible contingency of earthquakes, or to give the Municipal Commissioners wider powers than those which they at present possess for determining the nature of the repairs that should be executed after an earthquake.

Delay in submission of Commission's Report.

6. The Commission were, by the Resolution of the 6th April, 1897, requested to enter upon their labours at once, and to report to the Government the results of their deliberations within six months. An apology is due for the delay which has occurred in submitting this report, but it may be explained that some of the members of the Commission were absent from Calcutta for several months, and that, in consequence of all having other duties to attend to, it was found impossible to arrange for frequent sittings. Difficulty was also experienced in obtaining prompt replies to some of the letters issued by the Commission, and even now replies have not been received from some of the gentlemen who were asked to assist the Commission by an expression of their views.

Method of work.

7. The Commission have sat twenty-one times, to discuss the questions referred to them, to consider the materials supplied to or collected by them, and to take the evidence of witnesses. It was considered that the best way to obtain the assistance of gentlemen and associations having knowledge of the circumstances with which the Commission had to deal was to formulate a set of questions. This was done at an early stage, and the questions^[3] were widely circulated. Many valuable opinions have been received in answer to the said questions. Some other circulars were sent to gentlemen and associations from whom it was desired to obtain opinions on particular points. As the papers received by the Commission in reply to their Circulars provided ample materials, it was only found necessary to take the evidence of three gentlemen, namely, Dr. Simpson, Dr. Banks and Babu Jadu Nath Sen. The various materials obtained and considered by the Commission, together with minutes of their proceedings, are appended hereto.

[1] Paper No. 1 in Appendix VII.

[2] Paper No. 9 in Appendix VII.

[3] Paper No. 2 in Appendix V.

(History and operation of the statute-law and bye-laws for regulating the construction of buildings, the formation of streets, and the protection of streets from encroachment, in Calcutta.)

HISTORY AND OPERATION OF THE STATUTE-LAW AND BYE-LAWS FOR REGULATING THE CONSTRUCTION OF BUILDINGS, THE FORMATION OF STREETS, AND THE PROTECTION OF STREETS FROM ENCROACHMENT, IN CALCUTTA.

Statute-law.

8. The statute-law relating to the construction of buildings, from the earliest times, has been collected and printed in Paper No. 1 in Appendix II to this report. The portions of that law which bear more particularly on the matters dealt with by the Commission, and the statute-law relating to the formation of streets and the protection of streets from encroachment, are as follows. Preliminary.

9. The earliest enactment for regulating the construction of buildings in Calcutta was Act XII of 1837, passed by the Governor-General of India in Council. The object of this Act was merely to secure the provision of an outer-roof of incombustible materials on houses and out-houses. The Act authorised Magistrates to impose a fine not exceeding Rs. 100 on the owner of any house or out-house built after the 1st November, 1837, and not duly provided with such a roof; empowered the Superintendent of Police to tender to the owner of any house or out-house built before the 1st November, 1837, the amount required for covering the same with such a roof; and authorised the same official to cause such a roof to be constructed in any case in which an owner had neglected to do so. Incombustible roofs.

10. (1) Act XIV of 1856, section 36, prohibited, under penalty of a daily fine not exceeding Rs. 10,— Inflammable roofs and walls.

(a) the use of grass, leaves, mats or other inflammable material for the external roofs or walls of huts or other buildings erected in the future, and

(b) the continued use, except with the written consent of the Commissioners, of such materials in such buildings erected in the past which were contiguous to or adjoined any other building.

(2) Bengal Act VI of 1863, section 142, and Bengal Act IV of 1876, section 211, contained similar provisions.

(3) Bengal Act II of 1888, section 224, re-enacted the former law, with some modifications.

11. (1) Act II of 1848, section 18,—

(a) required 14 days' notice to be given to the Commissioners before beginning to dig or lay the foundations of any new house, or to rebuild any house; and Erection and alteration of buildings.

(b) provided that every such foundation should be laid at such level as the Commissioners' Surveyor should direct.

(2) Act XII of 1852, section 40, repeated section 18 of Act II of 1848 with some modifications.

(3) Act XIV of 1856, section 54, provided that, before beginning to build or re-build a house, notice should be given to the Commissioners and a plan submitted showing the levels at which it was proposed to lay the foundation and lowest floor. Section 55 allowed the Commissioners a period of 14 days for signifying their disapproval of the proposed levels and fixing other levels; section 56 empowered them to alter or demolish a building within the same period if no notice had been sent or if the building had been constructed at disapproved levels; and section 57 authorised the builder to proceed according to the plan sent in if the Commissioners failed to act within that period.

(4) Bengal Act VI of 1863, sections 160 to 163, and Bengal Act IV of 1876, sections 268 to 271, contained similar provisions, the latter Act however dealing with width as well as levels of foundations.

(5) Act XIV of 1856, section 52, prohibited the erection of buildings upon a lower level than would allow of the drainage being led into a public

(History and operation of the statute-law and bye-laws for regulating the construction of buildings, the formation of streets, and the protection of streets from encroachment, in Calcutta.)

sewer or into some place into which the Commissioners were empowered to empty their sewers.

(6) Bengal Act VI of 1863, section 158, and Bengal Act IV of 1876, section 275, contained similar provisions.

(7) The present Act (Bengal Act II of 1888):—

- (a) by section 235, provides that before beginning to build a new house, or to convert a hut or temporary structure into a house, a site plan shall be submitted to the Commissioners and their sanction to the site obtained, the Commissioners being bound to approve or disapprove of the site within 30 days;
- (b) by section 236, provides that before beginning to build a new house on a site approved under section 235, or to re-build or materially alter the structure of any house, an application shall be made to the Commissioners, describing the building, stating its dimensions and the purposes for which it is intended, and giving a plan of the building and other details;
- (c) by section 237, requires the Commissioners within 30 days from receipt of such application either to sanction or to disallow the building, or to call for further information in respect of certain details, and authorises the Commissioners to reject any plan, section or description unless assigned by a competent builder or surveyor;
- (d) by section 238, requires the Commissioners, within 30 days from receipt of details required under section 237, either to approve of the proposed building, or to disapprove of it for certain specified reasons, and provides that, if the Commissioners so disapprove of the building, it shall not be proceeded with until their requirements are met;
- (e) by section 239, allows the simultaneous submission of site-plan, application, plans and details in respect of a new house, with the proviso that the prescribed period of 30 days shall not commence to run until the site has been approved, and that, if work be not commenced within one year from date of approval, it shall not be begun without submitting a fresh application;
- (f) by section 240, authorises the Commissioners to demolish any building which has been commenced without sending in a site plan or without obtaining their approval to the site plan;
- (g) by section 241, authorises the Commissioners to demolish or alter any building or alteration which is commenced—
 - (i) without sending in an application, or
 - (ii) without waiting the prescribed period of 30 days, or
 - (iii) otherwise than in accordance with the information furnished by the builder, or
 - (iv) in contravention of any lawful orders issued by the Commissioners;
- (h) by section 242, authorises fines for building a new house without sending in the prescribed site-plan, or for building, re-building or materially altering the structure of any house without making the prescribed application;
- (i) by section 243, lays down, in respect of buildings which it is proposed to construct under section 236, certain requirements and prohibitions as to levels and width of foundation, level for facilitating drainage, height of plinth, privies, ventilation and free circulation of air; and
- (j) by section 244, authorises building or re-building to be proceeded with if the Commissioners fail to pass orders within the prescribed period of 30 days.

(History and operation of the statute-law and bye-laws for regulating the construction of buildings, the formation of streets, and the protection of streets from encroachment, in Calcutta.)

12. (1) Act XIV of 1856, section 50, empowered the Commissioners to control the erection of buildings over sewers or drains. Building over sewer or drain.

(2) Bengal Act VI of 1863, section 156, and Bengal Act IV of 1876, section 274, contained similar provisions.

(3) The present Act (Bengal Act II of 1888), section 243, clause (d), re-enacts the former law.

13. (1) Act XII of 1852, section 10, empowered the Commissioners or their surveyor to secure the demolition or repair of any house, building or wall, or anything affixed thereto, when in a ruinous state or likely to fall. Notice was to be given to the owner or occupier to demolish or repair, and in his default the Commissioners themselves were empowered to take the necessary action, all expenses incurred being recoverable from the owner. Ruinous buildings, etc.

(2) Act XIV of 1856, section 37, Bengal Act VI of 1863, section 143, and Bengal Act IV of 1876, section 266, contained similar provisions.

(3) The present Act (Bengal Act II of 1888), section 233, re-enacted the former law, and declared that sections 207 and 208 [summarised in paragraphs 25 (5) and 20 (8), *infra*] shall apply to houses demolished or repaired under these powers.

14. (1) Act XIV of 1856, section 90, authorised the Commissioners to repair, protect or enclose any building, tank, etc., which was, for want of sufficient repair, protection or enclosure, dangerous to passengers. Dangerous buildings, etc.

(2) Bengal Act VI of 1863, section 195, and Bengal Act IV of 1876, section 263, contained similar provisions.

(3) The present Act (Bengal Act II of 1888), section 231, re-enacted the former law.

15. (1) Act XIV of 1856, section 22, required notice to be given to the Commissioners before erecting a hut or range or block of huts in or near any street on ground not previously built upon, and gave the Commissioners power to require such huts to be built so as to stand— Erection and alteration of huts.

(a) in regular lines, with a free passage or way in front of such width as to secure ventilation and facilitate scavenging, and

(b) at such level as would admit of sufficient drainage.

The section further empowered the Commissioners to secure the demolition of huts erected without notice or otherwise than as required by them.

(2) Bengal Act VI of 1863, section 128, contained similar provisions.

(3) Bengal Act IV of 1876, section 277, required notice to be given to the Commissioners before erecting a hut or a range or block of huts or sheds, or before adding a hut or shed to any range or block existing at the commencement of the Act, and gave the Commissioners power to require such huts or sheds to be built so as—

(i) to stand in regular lines, with a free passage or way, in front of and between every two lines, of such width as to secure ventilation and facilitate scavenging;

(ii) to have the necessary number of privies and the necessary means of drainage;

(iii) to stand at such level as would admit of such drainage; and

(iv) to have a plinth of at least two feet above the level of the nearest public street.

(4) Section 278 of the same Act empowered the Commissioners to cause the demolition of huts or sheds erected without notice or otherwise than as required by them, and section 279 provided pecuniary penalties.

(5) Bengal Act VI of 1881, section 20, declared that the powers given to the Commissioners by Bengal Act IV of 1876, section 277, should be exercised within 14 days after receipt of the notice prescribed by that section.

(6) The present Act (Bengal Act II of 1888),—

(i) by section 247, provides that before beginning to build, re-build or add to any hut, an application shall be submitted to the Commissioners, together with a ground-plan, the Commissioners

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being bound within 14 days either to approve of the proposed work or to disapprove of it for certain specified reasons; and provides also that if the proposal is approved the work must be done within six months, and if disapproved the work shall not be commenced until the plan has been modified as the Commissioners may deem necessary;

- (ii) by section 248, authorises the Commissioners to demolish or alter any hut or addition which has been built (i) without making the prescribed application, or (ii) without obtaining the Commissioners' approval;
- (iii) by section 249, authorises fines for building, re-building or adding to a hut in contravention of section 247;
- (iv) by section 250, authorises building or re-building to be proceeded with if the Commissioners fail to pass orders within the prescribed period of 14 days.

Block of huts causing risk of disease.

16. (1) Act XIV of 1856, section 23, authorised the Commissioners to enforce measures for the avoidance of risk of disease to the inhabitants or the neighbourhood arising from a block of huts being huddled together, or being without drainage and being so situated as to make scavenging impracticable. The procedure prescribed was for the Commissioners to affix a notice requiring the owner or occupier to take measures for the avoidance of such risk, and, in default of such owner or occupier, for the Commissioners themselves to pull down the huts or take such other measures as they might consider necessary.

(2) Bengal Act VI of 1863, section 129, contained similar provisions.

(3) Bengal Act IV of 1876, sections 280 to 283, contained similar provisions, but gave the Commissioners power to take action only at a special meeting and upon the report of two medical officers whom they were empowered to depute to make an inspection. It was further provided by sections 284 to 286 of the same Act that the Local Government might take action in default of the Commissioners. By section 283A of the same Act (which was inserted by Bengal Act VI of 1881, section 21), the Commissioners were given an alternative power, acting with the sanction of the Local Government, to acquire the land occupied by an insanitary block of huts, to frame a scheme for the improvement of the area, and to sell or let the land to any person undertaking to carry out such scheme, or to engage with any person to carry out the scheme, or to carry out the scheme themselves. The Commissioners were further empowered to borrow money for purchasing land and carrying out a scheme of improvement as aforesaid. And restrictions were imposed on the length of time for which the Commissioners might keep possession of land acquired by them under the section.

Re-modelling of bustees.

17. The present Act (Bengal Act II of 1888) contains provisions for the re-modelling of bustees, which may be summarised as follows:—

- (a) By section 251 the Commissioners are empowered, subject to certain restrictions, to define and alter the external limits of any bustee.
- (b) By section 252 the Commissioners may require the owners of a bustee to prepare a joint plan showing (i) the manner in which the bustee should be laid out, with the huts standing in regular lines and with a free passage in front of and behind each line for ventilation and scavenging purposes, and (ii) the proposed drains, the water-supply, the bathing arrangements, privy accommodation, roads, common lands, &c. The Commissioners may modify such plan, and when they approve of it it becomes a standard plan. No hut may be built, re built, or added to, after a plan has been called for, until a standard plan has been prepared.
- (c) By section 253 the Commissioners themselves are authorised to prepare a standard plan at the cost of the owners of the bustee.

History and operation of the statute-law and bye-laws for regulating the construction of buildings, the formation of streets, and the protection of streets from encroachment, in Calcutta.)

(d) By section 254 provision is made for hearing and disposing of objections by bustee owners to the standard plan.

(e) By section 255 the building or re-building of or adding to huts is prohibited, except in accordance with the standard plan, and provision is made for the re-building of existing huts in accordance with the plan, compensation being paid to the owners. The Commissioners are further empowered to require the owners of a bustee to carry out improvements to meet the plan.

(f) By section 256 a bustee brought into conformity with a standard plan is to be deemed to be a re-modelled bustee.

18. The Act further reproduces the provisions of Bengal Act IV of 1876, sections 280 to 283 and 283A [summarised in paragraph 16(3), *supra*], with modifications. The new sections may be summarised as follows:— Speedy improvement of bustees.

(a) Section 257 empowers the Commissioners to have a bustee inspected by two medical officers when they (the Commissioners) consider that by reason of the manner in which the huts are crowded together, or for any other reason, the bustee is in such an unhealthy condition that the procedure prescribed by sections 252 to 256 [summarised in paragraph 17, *supra*] would be too dilatory. The medical officers are to make a report on the sanitary condition of the bustee, to frame a standard plan of the bustee, and to certify which of the proposed works should be taken in hand forthwith and which of them should be deferred for action under sections 252 to 256.

(b) Section 258 authorises the Commissioners to modify and approve the said standard plan and to require the owners or occupiers of the huts, or the land-owner, to execute the works which the medical officers have certified should be taken in hand forthwith.

(c) Section 259 authorises the Commissioners to execute such works themselves, in default of the said owners or occupiers and at the expense of the land-owners.

(d) Section 260 contains provisions as to the disposal of the materials of huts pulled down in the course of executing such works.

(e) Section 261 authorises the Commissioners to acquire land other than bustee land in the course of executing such works.

(f) Section 262 declares that, when such works have been completed, section 255 shall apply to the bustee until it is brought into complete conformity with the standard plan approved under section 258, after which the bustee shall be deemed to be a re-modelled bustee.

(g) Section 268 gives the Commissioners an alternative power, acting with the sanction of the Local Government, to acquire the bustee, and to sell or let the land to any person undertaking to carry out the standard plan, or to carry out the standard plan themselves. Restrictions are imposed on the length of time for which the Commissioners may keep possession of land acquired by them under the section, and it is declared that, when a bustee has been improved under the section, it shall be deemed to be a re-modelled bustee.

19. The Act further contains the following provisions, which are new.

(a) Section 263. Standard plans, whether prepared under section 252, section 253, section 257 or section 268, shall not, without the consent of the owners, show more than $\frac{1}{4}$ th of the area of the bustee as roads, or more than $\frac{1}{4}$ as open lands, excluding tanks which are not to be filled up. And they must, as far as possible, provide for one or more huts being completely Further provisions as to bustees.

(History and operation of the statute-law and bye-laws for regulating the construction of buildings, the formation of streets, and the protection of streets from encroachment, in Calcutta)

contained in each separate plot of bustee land; also for a due proportion of roadway and open ground in each plot, compensation being paid where more than the prescribed proportion of land is taken from any plot for roadway or open ground.

(b) Section 264 empowers any owner of bustee land by notice to the Commissioners to take it out of the category of bustee land.

(c) Section 265 provides that private roads shown in a standard plan shall remain the property of their owners, but shall be kept open to the Commissioners' conservancy carts and to the use of tenants of the bustee.

(d) Section 266 provides that notices under section 264 shall not, without the express consent of the Commissioners, affect any road shown in a standard plan.

(e) Section 267 secures to owners of land and huts the right to occupy roads, common ground, &c., shown in the standard plan.

Formation of
streets by Municipal
Commissioners.

20. (1) The earliest enactment which dealt with the formation of streets in Calcutta was Act XVI of 1847, passed by the Governor-General of India in Council. Section 15 of that Act directed that the municipal funds should be applied *inter alia* to the opening of streets and squares in crowded parts of the town, and the removal of obstructions to the free circulation of air, but no detailed procedure was laid down for effecting such improvements.

(2) Such a procedure was provided by Act II of 1848. Section 11 of that Act recited—

(a) that it was essential to the health and convenience of the inhabitants that straight and spacious streets and thoroughfares should be continued where they had been begun, and should in other cases be opened out so as to perforate the mass of buildings in the town in straight lines from south to north, from east to west, from south-east to north-west, and from south-west to north-west, large open spaces being left from which the said streets should diverge in lines without interruption to the river and to the surrounding open country, and

(b) that it was necessary that the narrow lanes and gullies inhabited by the native residents should be converted into straight and spacious streets and thoroughfares formed as aforesaid, compensation being paid to owners of buildings.

The section then proceeded to require the Commissioners to have plans of streets, thoroughfares and open spaces made; to select one of such plans and submit it to the Government with their recommendations, and to carry the selected plan into execution if sanctioned by the Government, and so far as funds and circumstances should permit. If any plan selected by the Commissioners was rejected by the Government, a new plan was to be submitted, and so again until a plan was finally sanctioned by the Government.

Section 12 of the Act required the Commissioners to purchase buildings and land for carrying out the plan, and left them a free hand in executing the necessary works.

(3) Act X of 1852, section 65, merely repeated the provisions of Act XVI of 1847, section 15 [summarised in paragraph 20(1), *supra*].

(4) Act XII of 1852, section 4, authorised the Commissioners, with the consent of the Governor of Bengal, to lay out, make, build and construct streets, to alter and widen narrow streets, and to turn, divert, discontinue, or stop up streets, due compensation being paid to owners of land. It was, however, declared that neither the Commissioners nor any one else should make or lay out any new street unless the same be, if a carriage road, at least 50 feet wide, or, if not a carriage road, at least 20 feet wide, the drains at the side of the street being excluded in both cases.

(5) The next Act was Act XIV of 1856. Section 6 of this Act authorised the Commissioners, with the consent of the Local Government, to lay out and

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make new streets, to turn, divert, discontinue or stop up any public street, and to widen, open, enlarge or otherwise improve any such street, due compensation being paid to owners and occupiers of land and buildings.

Section 7 authorised the application of the principle of recoupment with the consent of the Local Government.

Section 8 authorised the Commissioners to agree with owners of land for the absolute purchase thereof for the purpose of laying out and making new streets or of widening, enlarging, or otherwise improving any public street or road.

(6) Bengal Act VI of 1863, sections 110 to 112, contained similar provisions.

(7) Bengal Act IV of 1876, section 190, contained similar provisions, save that the consent of the Local Government was not required, and that the principle of recoupment was not authorised.

(8) The provisions of the present Act (Bengal Act II of 1888) as to the formation of streets by the Municipal Commissioners are as follow :—

- (i) Section 37 declares it to be the duty of the Commissioners, *inter alia*, to open out and improve bustees and to make adequate and suitable provision for the regulation of new streets, while section 36 (7) declares that the municipal property and funds shall be applicable, *inter alia*, to the construction and alteration of streets.
- (ii) Section 203 empowers the Commissioners to lay out and make new streets, to turn, divert, discontinue, or close any public street or part thereof, and to widen, open, enlarge, or otherwise improve any such street.
- (iii) Section 204 empowers the Commissioners to acquire land and buildings for improving or making any public street, and authorises the application of the principle of recoupment.
- (iv) Section 208 empowers the Commissioners to prepare plans of projected public streets, showing alignment, intended regular line, and other details, and declares that section 207 [as to line of street—summarised in paragraph 25 (5), *infra*] shall apply to such streets.

21. (1) Act XIV of 1856, section 21, gave the Commissioners powers of control over the making of new streets by private individuals, as regards level and width. Their powers were to be exercised within one month after receipt of notice.

Control by Municipal Commissioners over formation of streets by private individuals.

(2) Bengal Act VI of 1863, section 127, and Bengal Act IV of 1876, section 200, contained similar provisions.

(3) The present Act (Bengal Act II of 1888), section 213, contains similar provisions, and gives the Commissioners powers of control over the drainage arrangements as well as the level and width of such streets.

22. (1) Act II of 1848, section 10, authorised a fine of Rs. 50 for causing any obstruction to, or making any encroachment upon, any street.

(2) Act XII of 1852, section 41, authorised a fine of Rs. 50, with one month's imprisonment in default of payment, for—

Prohibition and removal of projections or obstructions in streets.

- (a) allowing any verandah, balcony, &c., to project into a public street or place at a height of less than 11 feet or to a distance exceeding 4 feet;
- (b) setting up a verandah, balcony, &c., to project into the road, without a license from the Commissioners;
- (c) placing any board, scaffolding, post, &c., in a public street, without or in contravention of a license granted by the Commissioners: or
- (d) erecting a wall or other obstruction in any street.

(3) Act XII of 1852, section 23, empowered the Commissioners or their Surveyor to remove any wall, fence, rail, post, or other obstruction or encroachment in any street or in or over any drain, sewer, or aqueduct.

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(4) Act XIV of 1856, section 19, authorised a fine of Rs. 100 for the erection of any wall, fence, rail, post or other obstruction or encroachment in any public street, or in or over any drain, sewer or aqueduct along the side of any such street, and empowered the Commissioners to remove such obstruction or encroachment at the expense of the person who erected it.

(5) Bengal Act VI of 1863, section 125, contained similar provisions.

(6) Bengal Act IV of 1876, section 199, also contained similar provisions, the Commissioners being further empowered to remove any such obstruction or encroachment erected subsequent to the 1st June, 1863.

(7) Act XIV of 1856, section 33, empowered the Commissioners to secure the removal or alteration of any projection, encroachment or obstruction erected or placed in the future against or in front of a building. It was provided, however, that roofs, eaves, sunshades, &c., might be projected 3 feet over a street at not less than 12 feet above the surface.

Section 34 of the same Act empowered the Commissioners to secure the removal or alteration of projections, &c., erected or placed in the past against or in front of a building in a public street, paying compensation, if the projection, &c., had been lawfully made.

(8) Bengal Act VI of 1863, sections 139 and 140, contained similar provisions, but the proviso authorising 3 feet projections was not re-enacted.

(9) Bengal Act IV of 1876, section 208, empowered the Commissioners to secure the removal or alteration of any projection, encroachment or obstruction erected or placed after the 1st June, 1863, in front of a house; and section 209 of the same Act empowered them to secure the removal or alteration of projections, &c., erected or placed before the said date against or in front of any house in a public street, paying compensation if the projection, &c., had been lawfully made.

(10) The present Act (Bengal Act II of 1888).—

(i) by section 212, re-enacted the provisions of Act XIV of 1856, section 19; and

(ii) by sections 221 and 222, re-enacted the provisions of Bengal Act IV of 1876, sections 208 and 209.

Permission of
projections over
streets.

23. (1) Act XIV of 1856, section 35, empowered the Commissioners to permit owners or occupiers of buildings in public streets not less than 25 feet wide to put up verandahs, balconies, sunshades, weather-frames, &c., to project from any upper-storey over the street, to an extent not exceeding 4 feet, or in special cases 5 feet, from the foundation.

(2) Bengal Act VI of 1863, section 141, contained similar provisions, but the restriction as to the width of the street was not re-enacted, and a projection of 5 feet was allowed in all cases.

(3) Bengal Act IV of 1876, section 210, repeated the provisions of Bengal Act VI of 1863, section 141, but omitted the direction as to the permissible width of a projection.

(4) The present Act (Bengal Act II of 1888), by section 223, re-enacted the provisions of Bengal Act IV of 1876, section 210, and empowers the Commissioners to impose conditions on the erection of verandahs, &c., and to remove such verandahs, &c., on breach of conditions so imposed.

Doors or gates
not to open out-
wards on street.

24. (1) Act XII of 1852, section 48, prohibited the future placing of doors or gates so as to open outwards on a street, and empowered the Commissioners to alter any door or gate so placed before the passing of the Act.

(2) These provisions were repeated in an amplified form by Act XIV of 1856, sections 30 and 31, and Bengal Act VI of 1863, sections 136 and 137.

(3) Bengal Act IV of 1876, section 206, provided that all doors, gates, and ground-floor windows opening upon a public street, whether hung or placed before or after the commencement of the Act, should be hung or placed so as not to open outwards and cause obstruction, and empowered the Commissioners to secure the alteration of any door, &c., hung or placed otherwise.

(4) Section 219 of the present Act (Bengal Act II of 1888), re-enacted section 206 of Bengal Act IV of 1876, with slight modifications.

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25. (1) Act XIV of 1856, section 26, authorized the Commissioners to allow any building to be set forward for improving the line of a public street.

Line of streets.

(2) Bengal Act VI of 1863, section 132, and Bengal Act IV of 1876, section 264, contained similar provisions.

(3) Act XIV of 1856, section 27, authorized the Commissioners to require a projecting building to be set back to or towards the regular line of a public street or the line of the adjoining houses or buildings, when the building had been taken down, full compensation being given to the owner.

(4) Bengal Act VI of 1863, section 133, and Bengal Act IV of 1876, section 265, contained similar provisions.

(5) The present Act (Bengal Act II of 1888),—

(a) by section 206, authorizes the Commissioners to prescribe a regular line for a public street;

(b) by section 207, re-enacted the former law as to setting buildings back, but authorizes action being taken when a building has either fallen down or been burnt down or been taken down; and

(c) by section 209, re-enacted the former law as to setting buildings forward.

Bye-laws.

26. None of the Acts prior to Bengal Act II of 1888 gave any specific power to make bye-laws for regulating either the construction of buildings or the formation of streets. Some bye-laws were, however, framed for the guidance of municipal employes in working section 277 of the Act of 1876, relating to the erection of huts. These bye-laws are printed on pages 82 to 84 of Mr. O. C. Dutt's "Hand-book of the Rules, Bye-laws, Regulations, &c., of the Calcutta Municipality," published in 1886, and are reproduced, with but little alteration, as bye-laws 10 to 19 made under clause (e) of section 412 of Bengal Act II of 1888.

Bye-laws prior to 1888.

27. By clause (e) of section 412 of Bengal Act II of 1888, power is conferred on the Commissioners to make bye-laws with regard to the "height and mode of construction of buildings," and, by clause (f) of the same section, power is given to make bye-laws with regard to "ventilation, and the extent to which space must be left for the free circulation of air as required by the provisions of section 243." These are the only powers given by the present Act for the making of bye-laws as to the construction of buildings, and there are no powers for making bye-laws as to the formation of streets.

Powers given by Bengal Act II of 1888 for making bye-laws.

28. The existing bye-laws may be summarised as follows:—

Existing bye-laws.

(1) *Bye-law (e) 1* declares that the re-building of an old masonry building shall be regarded as the erection of a new building if more than half of the old building has been taken down.

(2) *Bye-laws (e) 2 to 7* contain directions as to foundations, walls, footings, the provision of a damp-proof course, support to beams and girders, and the use of incombustible materials for roofs. No. 5 incorporates by reference certain bye-laws of the Metropolitan Board of Works relating to walls and height of storeys.

(3) *Bye-law (e) 8* requires a declaration to be made when a proposed building or hut is intended to be used for an oil, flour or scorky mill, or an iron foundry.

(4) *Bye-law (e) 9* directs that buildings and huts shall be constructed in accordance with the plan approved by the Commissioners.

(5) *Bye-laws (e) 10 to 21* regulate the erection of new huts in bustees. Nos. 10 to 13, 15 and 16 contain directions as to building huts in lines and as to the preservation of roadways, paths and

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spaces; No. 14 directs that no new hut shall, without special sanction, be erected at more than 100 feet from a road; No. 17 directs provision of privies; No. 18 regulates the height of the plinth; Nos. 19 and 20 deal with drainage, and No. 21 declares that the approval of the Commissioners shall be required to the re-building of the sides and roof of a hut.

(6) Bye-laws (f), 1 to 7, deal with masonry buildings to be newly erected on sites previously unbuilt upon.

No. 1 regulates construction on sites filled up with refuse.

No. 2 prohibits more than two storeys abutting on a street less than 40 feet wide except with the special consent of the Commissioners.

No. 3 requires, as to dwellings,—

- (a) that the whole of at least one side of every room shall either be an external wall or abut on an interior open space or on a verandah;
- (b) that such interior space shall have an area equal to not less than $\frac{1}{4}$ th of the aggregate floor area of all the rooms abutting thereon, and shall not be in any direction less than 6 feet across;
- (c) that such external wall shall, where it faces a street less than 16 feet wide, have between it and the boundary line of the premises an open space not less than 2 feet wide;
- (d) that there must be a space at the back, and if not attached to the adjacent premises then at the sides also, of 4 feet along the whole length between the building and the boundary line of the premises, or, if the boundary line is a wall, then between the building and the inner edge of that wall; and
- (e) that every prescribed open space, whether exterior or interior, must be kept free from any erection other than a boundary wall, and must be open to the sky, and must be kept open to access from each end.

No. 4 requires that every such open space must be raised at least one foot above the level of the nearest street, so as to admit of easy drainage.

Nos. 5 to 7 require that every room intended to be used as a dwelling-room, except rooms on the roof, shall be in every part 10 feet high, shall have a clear superficial area of not less than 80 square feet, and shall be ventilated by doors or windows opening directly into the external air or into a verandah, and having an aggregate opening of not less than $\frac{1}{4}$ th of the superficial area of the side of the room which faces an open space.

(7) Bye-law (f) 8 authorises the Commissioners to exempt from the provisions of all or any of the preceding bye-laws (e) and (f) any particular building or class of buildings to which the same may appear to them to be inapplicable.

INADEQUACY OF PAST AND PRESENT LAW, AND CONTINUANCE OF EVILS.

Inadequacy of law prior to 1888 as to construction of masonry buildings

29. The foregoing abstract shows that until the year 1888 no real attempt was made to control the construction of masonry buildings in Calcutta. Useful provisions were enacted for preventing the use of inflammable materials in the construction of roofs and external walls, and the placing of buildings over sewers was controlled; but beyond these points the powers conferred upon the Commissioners were of the most meagre description. Between the years 1848 and 1856 the Commissioners had authority merely to fix the level of foundations. From 1856 to 1876 they had no power beyond fixing the levels of the foundations and lowest floor, and in the latter year the only additional power conferred upon them was to fix the width of foundations. These were the only powers

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exercisable by the Commissioners in the case of new buildings. In the case of buildings in a ruinous or dangerous state they had powers of demolition and repair.

30. In regard to huts, the Commissioners had fuller powers. The Acts of 1856 and 1863 empowered them to enforce the erection of huts in regular lines, with proper passages for ventilation and scavenging, and at such level as would admit of sufficient drainage; but those powers could only be exercised where the ground had not already been built upon. The Act of 1876 removed the restriction just mentioned, and also empowered the Commissioners to require the provision of privies, drainage and a properly raised plinth. Special powers have also been enjoyed by the Commissioners from 1856 onwards for demolishing or otherwise dealing with blocks of huts found to be in an insanitary condition.

Law prior to 1888 as to erection, &c., of huts.

31. As regards the formation of streets, the necessity for empowering the Commissioners to open out streets was recognised by an Act passed so long ago as the year 1847. In the following year an important declaration was made by the Legislature as to the necessity for forming straight and spacious streets and thoroughfares and breaking up narrow lanes and gullies, and the Commissioners were required to make plans and execute the necessary works for these purposes, so far as funds and circumstances should permit. The Act of 1848 was, however, repealed in 1852, and from that year up to 1888 the Commissioners were merely empowered to lay out, alter and close streets. Between 1852 and 1876 these powers could only be exercised with the consent of the Local Government. From 1856 to 1876 the principle of recoupment was authorised, but it was not re-established until 1888.

Law prior to 1888 as to formation of streets.

From 1856 to 1876 the Commissioners were empowered to control the making of new streets by private individuals, but their control extended only to level and width.

From 1852 to 1856 streets (whether made by the Commissioners or by private individuals) were required to be at least 50 feet wide, or, if not intended for carriage traffic, then at least 20 feet wide (the drains at the side of the street being excluded from these measurements); but this provision was repealed in the latter year.

32. For the protection of streets from encroachment there has been legislative provision of gradually increasing efficiency from the year 1848 onwards; while from 1856 there have been provisions for improving the line of streets by setting buildings forward or back.

Law prior to 1888 as to protection of streets from encroachment.

33. It was not until the year 1888 that the statute law was substantially improved on the foregoing points, and it was not until that year that the Commissioners were given power to make bye-laws to supplement the statute-law. Both the new Act and the bye-laws are, however, drawn in such a manner that many of the improvements which they were intended to introduce have proved impossible of achievement.

Substantial improvement in the law not effected until 1888.

34. The omission of the Legislature to control the construction of houses and other masonry buildings in this city until 1888 is the more extraordinary when we find that, early in the century, the attention of the Government had been called to the necessity for suitable regulations. So far back as the 6th of June, 1803, the then Governor-General of Fort William, the Marquis of Wellesley, in a minute of that date, wrote as follows^[1] :—

Former representations to Government as to necessity for proper building regulations.

"The increasing extent and population of Calcutta, the capital of the British Empire in India, and the seat of the Supreme Authority, require the serious attention of Government. It is now become absolutely necessary to provide permanent means of promoting the health, the comfort, and the convenience of the numerous inhabitants of this great Town."

Amongst the defects which His Lordship enumerated as contributing to the unhealthiness of Calcutta, he mentioned—

"the houses in those quarters of the Town occupied principally by the native inhabitants, having been built without order or regularity, and the streets and lanes having been formed without attention to health, convenience, or safety of the inhabitants, to which cause must be chiefly ascribed the frequency of fires, by which many valuable lives had been annually lost and property to a great extent had been destroyed."

"It is a primary duty of Government," His Lordship continues, "to provide for the health, safety, and convenience of the inhabitants of this great Town by establishing a comprehensive system for the improvement of roads, streets, public drains and water-courses, and by fixing permanent rules for the construction and distribution of the houses and public edifices, and for the regulation of nuisances of every description."

"The appearance and beauty of the Town are inseparably connected with the health, safety and convenience of the inhabitants, and every improvement which shall introduce a

[1] See Paper No. 2 in Appendix II.

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greater degree of order, symmetry, and magnificence in the streets, roads, ghats, and wharfs, public edifices and private habitations, will tend to ameliorate the climate and secure and promote every object of a just and salutary system of police.

Improvement of
roads under aus-
pices of Lord
Wellesley.

85. It is recorded that, under the auspices of Lord Wellesley, all the roads in and about Calcutta were greatly enlarged, widened, and made conducive to public convenience and health, but no permanent or other regulation was fixed during His Lordship's tenure of office for the construction and arrangement of houses.

Committee of
1836.

86. In 1836, in pursuance of a recommendation made by Lord Auckland, the then Governor-General of India, a Committee was formed for the purpose of, amongst other things, framing a plan of local management and taxation for matters connected with the health, comfort and improvement of the Town of Calcutta. In one of the reports made by that Committee, the personal inspection of the portion of the town which is now included in Wards Nos. 7 and 8 was described by Sir John Grant and Mr. Rus'omjee Cowasjee, members of the Committee, in the following words:—

"We have passed through the greater part of the roads and lanes in the native part of the town bounded by Lall Bazar, Olive Street, Muchooa Bazar, and College Street. Setting out from Tank Square, we passed through Old China Bazar, passed the Armenian Church up to Burra Bazar, through all the windings of which we passed as far as the Mint, from thence to the Portuguese Church, Moorghhatta, along the Chitpur Road to Muchooa Bazar, and back through Colootollah Road. Through several of the lanes and alleys we could not pass, the same not being wide enough for the admission of any wheeled carriage or cart. The whole of this space, with the exception of some places near College Street, is most thickly inhabited; the houses and shops adjoin; and though not lofty are sufficiently high to exclude sun and air, the free circulation of the latter of which is effectually prevented by the extreme narrowness, sharp angles, and perpetual tortuosities of the streets, few streets being more than a quarter of a mile in length in the same direction, and many not so much; none of the streets, except those to be presently mentioned, much exceeding twelve feet between the front walls of the opposite houses, many being much narrower; and of this space, from one foot to one and-a-half foot in width, being occupied by a kennel on each side. These kennels are apparently two and-a-half feet deep, with brick sides, the bottoms filled with perfectly stagnant water and filth; and the tops covered, at distances of from one foot to two feet and two and-a-half feet apart, with buildings from six to ten feet in length, which in a few places are the entrances to houses, but which in all other instances are the supports of platforms used as shops, which platforms are erected immediately over the kennel, from one foot to three feet above it, the space between the bridge and the platform being closed to the front, so that no part of the kennel is accessible for the purpose of cleansing it, but the above-mentioned intervals of one, two, or two and-a-half feet in length, at various distances of not less than six, or more than ten, feet from each other; while the whole stench freely escapes into the streets and houses.

The space above described is the most populous part of Calcutta, and forms the "chief seat of its wealth and place of the residence of all the native bankers, merchants and tradesmen of Calcutta."

In spite of these reports, nothing seems to have been done before the year 1863 to improve the portion of the town the state of which was thus described,^[1] nor was any attempt made till then to prevent the condition of the remainder of the city becoming equally objectionable.

Present state of
overcrowding.

37. Although much has been done under the powers conferred by the Acts of 1876 and 1888 to reduce the state of overcrowding described by Sir John Grant, by including the old surface drains in the road area and by opening out new streets, the action of the Corporation has been limited by the funds available, and many portions of the town are still greatly overcrowded. For a description of the present overcrowded state of the town as a whole, we beg to refer to the portions of the following documents which refer to that subject, namely:—

- (a) the report addressed on the 28th October, 1896, to the Sanitary Commissioner for Bengal, by Drs. Vaughan, Deare, Peck, Dawes and Hay-Jagannadham^[2];
- (b) the reports by Dr. Pilgrim on the sanitation of Bhawanipur, Kidderpore and Watgunge,^[3] and
- (c) the extracts from Dr. Simpson's memorandum of the 23rd December, 1896, which are printed as Papers No. 19 in Appendix 1 to this Report.

^[1] See answers to Question No. 21 of the 3rd May, 1897, in Appendix V.

^[2] Paper No. 24 in Appendix I.

^[3] Papers Nos. 25 and 26 in Appendix I.

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38. In 1888, by Act II of the Acts of the Bengal Council of that year, what was intended to be a complete set of Building Regulations was enacted. We are asked to report on the operation of the building clauses of that Act, and of the bye laws passed under the powers given by that Act.

39. There is a certain amount of difference of opinion as to whether buildings which have been erected since the passing of that Act are superior to those previously built.^[1] In dealing with this question, we refrain from comparing the houses now being built with those which were built many years ago in parts of Calcutta where land was cheap, and where it was possible for the person building a new house to make ample provision for the admission of light and air. We can compare only the buildings constructed since April, 1889, the date on which the new Act came into force, with those which were built in recent times, but before that month. We are satisfied, on the evidence before us, that, in consequence of the provisions of the new Act and of the bye-laws passed thereunder, improvements have been made in the construction of houses; but, in consequence of defects in the Act and bye-laws and of difficulties in the working of them, to which we will hereafter refer, the improvements have not been so marked as might have been hoped.

40. Of those Associations and gentlemen who answered No. 19 of our Questions of the 3rd May, 1897, the British Indian Association, Brigade-Surgeon-Lieutenant-Colonel Joubert, Mr. Braunfeld, Messrs. Martin and Company, Babu Priyanath Mullick, Babu Jadu Nath Sen, Babu Koilas Chundra Bose, Babu Kanty Chunder Banerjee, Babu Radha Churn Pal and Moulvie Ahmud, Khan Bahadur, all speak to the present buildings being superior.

Dr. Banks and Babu Denendro Narain Roy say they are inferior. The former, however, says that the material of which houses are built now-a-days is better, but the walls are not so thick.

Dr. Simpson, in his answer to No. 19 of our Questions of the 3rd May, said that the passing of the Act of 1888 had not improved matters; but, when examined by us, he admitted that if the Act and bye-laws had not been passed building on sites formerly unbuilt upon would have been done in a more insanitary way, ^[2] and that to the extent to which the Act goes it is an improvement ^[3].

Dr. Bully Chunder Sen, Babu Satish Chandra Ghose and Rai Okhil Chunder Mukerji also consider that there has been no improvement. The Bengal Chamber of Commerce consider that there has been no material improvement ^[4]. The Calcutta Trades Association also take the view that there has been no improvement ^[5].

Mr. Broughton (the Administrator-General of Bengal) ^[6], Babu Nilamber Mukerji (the Vice-Chairman of the Calcutta Corporation) ^[7], Babu Mano Mohun

^[1] See answers to Question No. 19 of the 3rd May, 1897, in Appendix V.

^[2] Answer No. 39, in Appendix IV.

^[3] Answer No. 41, in Appendix IV. See also the explanation at the commencement of the evidence of the 24th July, 1897, and Answer No. 45, in the same Appendix.

^[4] Answer of Bengal Chamber of Commerce to Question No. 19 of the 3rd May, 1897:—

"Since the passing of Act II of 1888, there has been no material improvement in the construction of buildings. It is difficult to say whether buildings erected since the passing of this Act are superior or inferior to those previously built, but in the northern portion of the town, especially in Burra Bazar, there has apparently been no change for the better." (Paper No. 7 in Appendix V.)

^[5] Answer of Calcutta Trades Association to Question No. 19 of the 3rd May, 1897:—

"Since the passing of Act II of 1888, there does not seem to have been any improvement in the construction of buildings. In many parts, we think, especially in the more congested portions, things are worse, land having increased so much in value that every foot is utilised now, overcrowding being the result." (Paper No. 16 in Appendix V.)

^[6] Mr. Broughton's answer to Question No. 19 of the 3rd May, 1897:—

"I think that buildings erected since 1888 are better in some respects than earlier buildings—

(1) because of the restrictions placed upon building, &c., by the Act and bye-laws;
(2) because beams, iron and steel girders and burgals are now used instead of wooden beams and burgals.

I think that they are inferior to many of the older buildings—

(a) because the walls are not so thick; and
(b) because, under the system of sub-contracts, it is almost impossible to avoid imposition by the building contractors who do the work. Even the few European firms there are have not time to supervise efficiently the numerous buildings undertaken by them." (Paper No. 14 in Appendix V.)

^[7] Babu Nilamber Mukerji's answer to Question No. 19 of the 3rd May, 1897:—

"Since the passing of the Act II of 1888, the buildings erected are superior to those previously built, having—

(a) generally more breathing space in the dwelling-rooms;
(b) wider and higher windows;
(c) surface drains in better working order in consequence of more frequent and extended use of Portland cement;
(d) higher plinths;
(e) most privies not being under dwelling-rooms;
(f) better finish in construction;
(g) better architectural decorations;
(h) more extended use of venetians;
(i) more extended use of iron in lieu of wood, thereby slightly diminishing danger from fire;
(j) diminution of the extent of surface drains carrying impurities.

These buildings are, however, inferior to those previously built in having generally,—

(1) a larger number of storeys in height, obstructing light and ventilation to the adjacent streets and to the spaces inside the houses;
(2) narrower court-yards;

[N.B.—The necessity for shortening the space in court-yards and availing of the space in height has been caused by the rise in value of land.]

(3) closer proximity of privies to dwelling-rooms. (Paper No. 34 in Appendix V.)

(Main defects in present Act and Bye-Laws.—Form of new legislation.—Whether different regulations for different quarters of the town are necessary.)

Ghose (Assistant Superintendent of Roads and Buildings), Dr. R. Sen (the Assistant Health Officer) and Dr. B. M. Sircar consider that in some respects the new houses are superior and in others inferior. The matters in respect of which Mr. Broughton considers the new buildings to be inferior are not matters dealt with by the Act or the bye-laws.

MAIN DEFECTS IN PRESENT ACT AND BYE-LAWS.

Main defects in the present Act and bye-laws.

41. Before dealing in detail with the alterations which we consider ought to be made in the existing law, we desire to report that the main defects which we find in the Act and bye-laws and in their working are as follow :—

- (1) the absence of power to prevent the construction of buildings contrary to the regulations contained in the bye-laws ;
- (2) the want of effective powers of punishment for offences against the Act ;
- (3) the absence of any provision in the Act for the width of streets or for the height of houses ;
- (4) that much of the matter contained in the bye-laws would properly find its place in the Act ;
- (5) that the Building Committee of the Commissioners is too large a body for the purpose of dealing with questions relating to buildings ;
- (6) that bye-law (f) 8 [1] is too wide in its terms.

Complaint has also been made against the first proviso in section 235 of the Act, but provided that the Committee we recommend (see paragraph 44, *infra*) be appointed we see no objection to such a proviso.

FORM OF NEW LEGISLATION.

Form of the legislation now required.

42. To remedy these defects extensive amendments in the law will be required ; but it would be possible, by amending Bengal Act II of 1888, to provide for all that is necessary. The question whether the alterations in the law should take the shape of a new Act, or should be introduced into the existing enactment, is one rather of form than of substance. The amendments which we are about to recommend are numerous, but they can conveniently be made by repealing the building sections [2] of the present Act and inserting new sections in their place.

As the regulation of streets and buildings will remain a part of the municipal system and, if our recommendations (see paragraph 41, *infra*) are accepted, will be placed under the control of a Committee to be composed of members of the Corporation, it will be more convenient that the rules governing the construction of buildings should remain as a part of the law which constitutes the Municipality.

A large majority of the persons whom we have consulted [3] are in favour of an amendment of the present Act in preference to the separation of the building law from the rest of the law relating to the Municipality, and we see no reason to differ from their views.

WHETHER DIFFERENT REGULATIONS FOR DIFFERENT QUARTERS OF THE TOWN ARE NECESSARY.

Whether different regulations for different quarters of the town are necessary.

43. We are asked to consider whether different sets of building regulations are not desirable for different quarters of the town. When we come to

[1] Bye-law (f) 8 is as follows :—

"The Commissioners may exempt from the provisions of clause (e) or (f) any particular building or class of buildings to which the rules or any particular rule may appear to them to be inapplicable."

[2] Sections 238 to 250.

[3] See Answers to Question No. 5 of the 3rd May, 1897, in Appendix V.

(Changes needed in the existing law.)

consider the question as to the possibility of framing a scheme for the laying out of the town, we will point out how differences will have to be made between areas which are now built upon and those which, as in some of the suburbs of the town, have as yet only small portions covered with masonry buildings; but we may say at once that the necessities of the several portions do not require any variations in the general elementary rules, which are as necessary for sanitation and ventilation in one part of the town as in another. The question will, however, be further dealt with in the Bill which, as stated in paragraph 143, *infra*, we intend to submit to the Government.

CHANGES NEEDED IN THE EXISTING LAW.

44. We consider it to be of the utmost importance that the powers now possessed by the Commissioners to control the action of the Executive with regard to the erection of buildings, the enforcement of building regulations and the protection of streets from encroachment, together with such further powers in the same behalf as may be considered necessary, should be entrusted to a small Committee, to whom only an appeal should lie from the action of the Executive officers. This Committee should be entirely independent of the general body of the Commissioners, and their decisions, when in accordance with law, should be final. The formation of new streets and the carrying out of other schemes of improvement out of funds provided by the Corporation should also be in the hands of this Committee. We think that the Commissioners in meeting should have power to settle the amount to be spent and to impose such conditions as they may think fit on the expenditure of such funds, but that the land should be acquired and all the work should be executed under the direction of the Committee. The Committee, however, should neither undertake any work nor make any substantial alteration in the details of any scheme without the permission of the Commissioners in meeting.

Committee for
control of building
and street regula-
tions, etc.

Prosecutions should only be instituted with the sanction of the Committee, and orders for demolition should be made only on their application.

In order to relieve the Committee of difficulties in the interpretation of the law, and to secure uniformity in such interpretation, they should be empowered, either at the request of parties or at their own instance, to state a special case for the opinion of the High Court. The costs of such reference should be in the discretion of the Court. We have no doubt that the High Court would, in order to prevent such references becoming unduly costly, frame, as in the case of Small Cause Court references, a scale of costs which would be confined within reasonable limits. Power should be given to the High Court to frame such scale. The powers suggested in this paragraph could apparently only be given by the Supreme Legislative Council.

We have carefully considered how the Committee should be constituted, and are of opinion that it might well consist of the following:—

- (a) the Chairman, or, in his absence, the Vice-Chairman of the Commissioners, as President;
- (b) the Engineer of the Corporation;
- (c) two Commissioners, to be elected every three years by the general body of Commissioners;
- (d) one Commissioner, to be nominated every three years by the Local Government.

It should be in the power of this Committee to obtain the advice and assistance of the Health Officer and of other sanitary and engineering experts.

The Bengal Chamber of Commerce [1] and the Calcutta Trades Association [2] have suggested that this Committee should include the Health Officer, a Public Works Department Engineer, and two representatives from the leading architects, contractors or builders in the town; but, so far as the Health Officer is

[1] See their answer to Questions Nos. 2 and 3 of the 3rd May, 1897, in Paper No. 7, Appendix V.

[2] See their answer to Questions Nos. 4 and 5 of the 3rd May, 1897, in Paper No. 16, Appendix V. For other suggestions as to the constitution of this Committee, see answers to Question No. 4 of the 3rd May, 1897, in Appendix V.

(Changes needed in the existing law.)

concerned, we think it preferable that he should be subordinate to the Committee rather than one of its members, and, after careful consideration, we see no reason for including in the Committee persons who are unconnected with the Municipality.

Trustees for administration of funds provided, otherwise than by the Corporation, for the opening out of congested areas.

45. We are of opinion that, for the administration of any funds which may be provided, otherwise than by the Corporation itself, for the opening out of congested areas, a separate Act should be passed constituting a body of trustees comprising representatives from the Calcutta Corporation, the Bengal Chamber of Commerce, the Bengal National Chamber of Commerce, the Calcutta Port Trust, the Calcutta Trades Association, the British Indian Association and the Railways running to Calcutta.

Assistance should be rendered by Police in carrying out orders of Commissioners, etc.

46. In order to make any regulations effective, there should be the most complete power to carry out the orders of the Committee. As matters stand at present, the orders of the Commissioners have frequently been defied, [1], and they obtain no assistance whatever from the Police. [2] Either the police officers should be obliged to afford all necessary assistance for the purpose of carrying out the orders of the Committee, of the Commissioners, or of the Chairman [3], or the powers of police officers should be given to the officers of the Municipality. The former course is preferable.

Speedy service of summonses required.

47. Complaints have been made to us as to the great delay which at present takes place in prosecutions by the Municipality. It is said that it always takes a long time, and sometimes as much as two months, to serve a summons. Summonses are served by police officers. There should be a sufficient number of officers specially detailed for this work, or other provision should be made for the service of summonses more expeditiously than is possible under present arrangements.

Stipendiary Magistrates should be appointed.

48. In order to secure uniformity of decisions, one or more special stipendiary Magistrates for the trial of offences against the provisions of the Act should be appointed under section 422 of the Act. Complete jurisdiction over the whole of the Municipal area should be given to each such Magistrate.

Necessity of careful selection of and supervision over subordinate officers.

49. It is also necessary, in order to carry out effectually any new laws which may be enacted, that the greatest care should be taken in the selection of the subordinates who have the carrying out of work, and the supervision over the work of such subordinates should be complete. However good the machinery provided may be, it can do little real good unless those who have to work it are both qualified and trustworthy.

Only licensed builders should be permitted to build.

50. In the opinion of the majority of us, it is necessary, in order that the law might more effectually be carried out, and that houses might be built in a better way, that only builders who have received a license from the Engineer of the Corporation should be permitted to build. A fee would be chargeable for such license, and the license would at any time be liable to withdrawal. An appeal should lie to the Committee from the refusal or withdrawal of a license.

Minimum width of public streets.

51. The most marked defect in the existing law is the absence of any provisions for the minimum width of streets and for the maximum height of houses with reference to the width of the streets which they abut. Had it not been for the power of the sun's rays and for the strength of the winds which blow in Calcutta for a large portion of the year, there is no doubt but that many quarters of the town would have been infinitely more insanitary than they now are. It is necessary, so far as possible, that these natural sanitary agents, light and air, should have greater opportunity of rendering the town

[1] For some examples, see Dr. Simpson's answer to Question No. 2 of the 3rd May, 1897, in Paper No. 45, Appendix V. As an illustration of the difficulties in the administration of the law, see Papers No. 1 in Appendix X.

[2] As to the view taken by the late Commissioner of Police respecting the powers of the police, see his letter to the Chairman of the Corporation, dated the 3rd July, 1894 (Appendix X, Paper No. 1, pages 17, 18).

[3] See Bombay Act III of 1898, section 522, which is as follows:—

Co-operation of Police.

"(1) The Police Commissioner shall, as far as may be, co-operate, by himself and through his subordinates, with the Commissioner for carrying into effect and enforcing the provisions of this Act and for the maintenance of good order in the city.

"(2) It shall be the duty of every police officer in the city to communicate without delay to the proper municipal officer any information which he receives of a design to commit or of the commission of any offence against this Act or against any regulation or bye-law made under this Act, and to assist the Commissioner or any municipal officer or servant reasonably demanding his aid for the lawful exercise of any power vesting in the Commissioner or in such municipal officer or servant under this Act."

(Changes needed in the existing law.)

more wholesome than it is. Moreover, for purposes of traffic and locomotion, it is necessary that the width of streets should be regulated. We will hereafter consider how far it is desirable and possible that new streets and spaces should be opened out in congested areas; but, apart from this, we think it absolutely necessary that a minimum width should be fixed for all public streets to be opened out in any part of the town. We are satisfied on the evidence [1] before us that the proper minimum to fix for the width of public streets in masonry areas is forty feet. This will give twenty-four feet for roadway and sixteen feet for footpaths. Twenty-four feet would admit of two lines of traffic progressing at moderate speed without getting into the channels, and would also give room for a heavy wagon or large carriage to turn safely.^[2] Forty feet will of course not be sufficient width for main roads which have to be opened out as arteries of traffic and communication, but it is quite enough for a minimum.

52. A minimum of forty feet has been recommended by the British Indian Association, Dr. O'Brien, Dr. Simpson, Dr. Banks, Mr. J. G. Apar, Babu Jadu Nath Sen, Mr. Braunfeld, Dr. R. Sen and Babu Denendro Narain Roy. This is also the view taken by the Calcutta Trades Association. Babu Nilamber Mukarji, the Vice-Chairman of the Corporation, would place that limit in cases of roads running from east to west, while he would allow twenty-four feet roads running from north to south. Babu Priyanath Mullick would fix forty feet as the minimum of streets running north to south, and sixty feet in case of streets running east to west. Of those who recommend a higher minimum, the Bengal Chamber of Commerce suggest eighty feet as the minimum width of what they describe as main roads, but they do not suggest any minimum for ordinary roads. Babu Joy Gobind Law would fix for main roads sixty to seventy feet, and for others twenty-four to thirty feet in residential quarters, and fifty feet in business parts. Messrs. Martin and Company recommend a minimum of sixty feet.^[3]

Opinions of authorities consulted as to minimum width of streets.

53. We have endeavoured to ascertain whether there should be any variation in the minimum width of a street in accordance with the direction of the street and with regard to the fact that the prevalent winds are from the north and from the south. The answers [4] given to us show that there is a difference of opinion on the subject. We think that there should be no such variation. Even if the width of the street be not so important for purposes of ventilation in streets running north and south as in streets running east and west, it is as important for purposes of traffic in the one case as in the other.

No variation should be made in minimum width of street in accordance with the direction of the street.

54. With regard to bustee areas, we consider that the minimum width for public roads should be fixed at 20 feet.

Minimum width of public roads in bustees.

55. In fixing a minimum for new streets to be opened out, we do not desire to prevent the widening of existing lanes to a width less than such minimum. It is better that narrow lanes should be widened to a small extent than that they should not be widened at all.

Minimum not necessarily applicable where lanes widened.

56. The conclusion at which we have arrived as to the relation which the height of a house should bear to the width of the street which it abuts is supported by the opinions of a large majority of the gentlemen whom we have consulted [5].

Height of houses in relation to width of streets.

[1] See letter dated the 6th May, 1897, from Mr. Hughes (Appendix X, Paper No. 10). In London 40 feet is the minimum—see the London Building Act, 1894 (57 & 58 Vict., c. 213) s. 11. In his evidence (see Answer No. 174, in Appendix IV), Dr. Simpson gives other reasons for a minimum of 40 feet. The law in Bombay (section 294 of Bombay Act III of 1888) is as follows:—

"294. No new public street made under section 291 shall be less than forty feet in width if such street be made for carriage traffic, or 20 feet if such street be made for foot traffic only; and no steps and, except with the written permission of the Commissioner under section 310, no other projection shall extend on to any such street."

Minimum width of new public streets.

Act XII of 1852 required carriage roads to be of a minimum width of 80 feet—see paragraph 20(4), *supra*.

[2] See letter dated the 6th May, 1897, from Mr. Hughes (Appendix X, Paper No. 10).

[3] See Answers to Question No. 6 of the 3rd May, 1897, in Appendix V.

The following advise a lower minimum:—Mr. Simmons thinks 36 feet sufficient. Babu Bully Chunder Sen, while requiring 60 feet in the case of first class streets, would permit second class streets from 20 to 26 feet wide, and third class streets from 10 to 12 feet. Dr. Koilas Chundra Bose considers 20 feet to be sufficient. Babu Kanaye Lal Mukherjee recommends 16 feet, and Dr. B. M. Sircar considers 24 feet sufficient for short streets of a local nature.

Babu Radha Churn Pal thinks that, while all main roads should be not less than 40 feet wide, it would be sufficient to prescribe for connecting or cross roads a minimum of 20 feet, or, where the road is short (say, 100 or 200 feet in length), then 16 feet; these several widths to be exclusive of footpaths, which should be provided wherever necessary.

[4] See answers to Questions Nos. 6, 7 and 8 of the 3rd May, 1897, in Appendix V.

[5] See answers to Question No. 10 of the 3rd May, 1897, in Appendix V.

(Changes needed in the existing law.)

In our opinion, what is generally known as the 45-degree rule ^[1] should be adopted, that is to say, no portion of any building hereafter erected, re-erected or materially altered, and situated at the side of a street, should intersect any of a series of imaginary lines drawn across the street at an angle of 45 degrees with the ground; such lines being drawn from the adopted or prescribed line of the street, opposite the building in question, at the level of the pavement or of the centre of the street. Thus, if a house be built at the edge of the street, it must not exceed in height the width of the street, but, by setting back the house or some of its storeys, it would be possible to increase the height of the house.

The British Indian Association, in the answers which they have been good enough to send to our questions, recommend ^[2] that, "having regard to the dampness of the soil, a second storey should be allowed irrespective of the width of the street or lane—dampness being perhaps more prejudicial to health than imperfect ventilation." The great majority of the answers which we have received to our Question No. 13 ^[3] show that with proper precautions houses with one storey can be built so as to be both dry and sanitary.

Amendment of Bengal Act II of 1888, section 206 (additions to buildings within regular line of street).

57. The first section of the Act, the amendment of which we recommend, is section 206. We would give the Committee power to permit additions to existing buildings within the regular line of the street, upon the applicant executing an agreement binding himself and his successors in interest not to claim compensation in the event of the Committee at any time thereafter deciding to remove any portion of such additions.

Any additions made under such permission should be carried out in accordance with the regulations for the time being in force.

Not only should power to enter into such an agreement be given to the Committee, but they should have power to apply to the Magistrate whenever they think fit for an order to demolish the additions at the cost of the owner.

Section 206 should apply to walls as well as buildings.

Amendment of Bengal Act II of 1888, section 207 (setting buildings back).

58. Section 207 requires alteration. At the end of the first clause we would recommend that the words "or the line of either one of the adjoining houses" be added. The house which is being dealt with may stand between two houses, one of which projects less than the other. It should be open to the authorities to require the house to be set back to the line of either of the two adjoining houses.

It should also be provided, as in section 91(1) of the Punjab Municipal Act (XX of 1891), that the portion of land added to a street by virtue of any order issued under this section shall become part of the street, and shall vest in the Commissioners, payment being made under the proviso to section 207.

A clause should be added to section 207 providing, as in section 298(2) of the City of Bombay Municipal Act, 1858, that when a house or wall, or any part thereof, projecting beyond the regular line of a public street, has fallen down or been burnt down or been taken down, the Chairman may at once take possession, on behalf of the Corporation, of the portion of land within the regular line of the street and, if necessary, clear the same, the sum due for compensation being paid immediately.

Section 207 should apply to walls as well as houses.

New section for Bengal Act II. of 1888 (power for Chairman to take possession of land, etc., within regular line of street).

59. A new section should be inserted in the Act, on the lines of section 299 of the City of Bombay Municipal Act, 1888, as follows:—

"If any land, whether open or enclosed, not vesting in the Corporation, lies within the regular line of a public street and is not occupied by a building, or if any platform, verandah or step, or any other structure external to a building abutting on a public street, or any portion of any such platform, verandah, step or other structure, is within the regular line of a public street, the Chairman may, after giving to the owner of the land or building not less than seven clear days' written notice of his intention so to do, take possession on

[1] This rule has been accepted by the High Court in Calcutta as showing what amount of light and air is necessary for the convenient enjoyment of a house. See *The Delhi and London Bank v. Hem Tail Dutt*, I. L. R., 14 Calc., 839; also *Clement v. Meloney* (Suit No. 271 of 1883, decided by Wilson, J., cited in I. L. R., 14 Calc., page 849).

[2] See their answer to Question No. 13 of the 3rd May, 1897 (Paper No. 13 in Appendix V).

[3] See Appendix V.

(Changes needed in the existing law.)

behalf of the Corporation of such land, with its enclosing wall, hedge or fence (if any), or of such structure or portion, as the case may be, and, in his discretion, clear away the same; and the land so acquired shall thenceforward be deemed a part of the street:

Provided that, if the land or building is vested in Her Majesty or in any Corporation constituted by Royal Charter or by an Act of Parliament or an Act of the Governor General in Council or the Lieutenant-Governor of Bengal in Council, possession shall not be taken as aforesaid without the previous sanction of the Local Government."

It should also be provided that the provisions of section 207 as to compensation shall apply when possession is taken under this new section, and that the sum due for compensation shall be paid immediately.

60. The provisions which we have suggested in paragraph 51, *supra*, as to the minimum width of public streets, would properly find a place in section 208 of the Act. Amendment of Bengal Act II of 1888, section 208 (width of public streets).

61. A good deal of difficulty has been found in the working of section 212, especially in the added area. Little by little encroachments are made, and eventually it becomes difficult to enforce their removal. We recommend that it be provided that, unless the contrary be shown, it shall be presumed that every public street extends to the outside edge of the drain (if any) on either side of the street, or, in the absence of a drain, up to the wall of the building. Where the Committee, taking advantage of this presumption, remove projections, &c., they should not be bound to pay compensation, but they should be bound to provide proper means of access to and from the street if none exist already. Amendment of Bengal Act II of 1888, section 212 (obstructions in street).

A daily fine should be provided in the case of an offence under section 212 continuing.

62. It should be provided in section 213 that private streets shall be subject to the same regulations as public streets as regards level and width, and that the rules as to the height, &c., of buildings abutting them should be the same as in the case of public streets. Amendment of Bengal Act II of 1888, section 213 (private streets).

63. There is also a necessity for a daily fine in the case of the continuance of an offence under section 221. There have been great difficulties in dealing with this section. The Municipal Commissioners necessarily find it difficult to prove at what time a projection or obstruction was made, and, as this is a penal clause, the presumption would under the present law be made in favour of the defendant, that is, that the projection had been erected before the 1st June, 1863. We think that it should be provided that, unless the contrary be shown, it shall be presumed that any projection, encroachment or obstruction was erected or placed after the 1st June, 1863. Section 221 is a reproduction of section 139 of Bengal Act VI of 1863, and, although its provisions were fair when they were enacted in 1863, they have now, after the lapse of more than thirty years, changed their character and become unfair to the Municipality. Amendment of Bengal Act II of 1888, section 221 (obstructions in street).

64. We think that section 223 requires alteration. We are divided in opinion on the subject. The majority, consisting of the Hon'ble Mr. Risley, the Hon'ble Mr. Glass, Babu Nalin Behari Sircar, Dr. Dyson and Mr. Banks-Gwyther, consider that no verandahs supported by pillars resting on the public footpath or road should be allowed. The President, Mr. Bright and Mr. Hughes would allow the Committee to permit supported verandahs provided there be no roof or covering over them [1]. Babu Kally Nauth Mitter would permit a roof or covering. Amendment of Bengal Act II of 1888, section 223 (verandahs).

It is, however, very doubtful whether the Commissioners have power under the present law to allow the supports of a verandah to rest on a public pathway or road, and we think that this question should be settled by the Legislature.

We are unanimously of opinion that no verandahs should be allowed in streets without footpaths or streets less than forty feet wide, and that no supported verandahs should be permitted to be erected where the footpath is less than nine feet wide.

65. The Corporation has been advised that it has no power to contract for letting the right to put up verandahs, and, in one case, where an arrangement had been come to, the party resiled from it on the pretext that the Powers of contract.

[1] This is the present practice—see the Resolution passed by the Commissioners on the 6th September, 1888, cited in the paper appended to Babu Nalin Behari Sircar's note dated the 9th December, 1887 (Paper No. 21 in Appendix X).

(Changes needed in the existing law.)

contract was beyond the powers of the Corporation. We consider that, if supported verandahs be allowed, powers should be given to the Committee to contract for rent or to make any other conditions with persons desiring to erect them.

We think also that such powers should be retrospective, *i.e.*, that contracts hitherto made by the Commissioners should be declared to be valid.

We further think that with regard to all matters the most complete powers of contract should be given to the Corporation and to the Committee.

66. The limit of Rs. 500 imposed by section 429 should be withdrawn.

Amendment of
Bengal Act II of
1888, section 429
(fees).

Building work
should not be com-
menced without
sanction, or carri-
ed on contrary to
sanctioned plan.

67. Section 235 and the following sections require much amendment. It is remarkable that, as the law at present stands, there is nothing to prevent a house or hut being built without sanction, or to prevent a deviation from the sanctioned plan. Provided that a ground plan as required by section 235 be sent in, and an application be made under section 236, a person building, re-building, or materially altering a house incurs no penalty, and may build how he likes. In the same way a person building a hut, provided he sends in a notice under section 247, is not bound to follow the plan which has been approved.

In our opinion no building, re-building, or material alteration should be commenced until sanction has been obtained [1], and any deviation from the sanctioned plan should render the owner liable to fine, and the building, re-building, or alteration, as the case may be, liable to demolition to the extent of such deviation.

Prevention of
delay in sanctioning
building work.

68. On the other hand, complaint has been made to us that persons contemplating building are subjected to undue delay after applying for sanction, and are harassed by unnecessary and unauthorised objections. We therefore think it desirable that the grounds of objection should appear specifically in the Act, that no others should be permissible, that all objections to sanction be formulated in the first instance, and that, in case sanction has neither been given nor refused during the prescribed period, the Committee should be required to determine, immediately on the expiration of such period, whether the building may be sanctioned or not. In the case of lawful objections to the sanction being made, a further application, giving the required particulars, or otherwise seeking to conform with the law, should be treated as a new application. The power of giving or refusing sanction would lie in the first instance with the Engineer, subject to an appeal from his decision to the Committee.

Employment of
officer having
architectural quali-
fications.

Requisition for
information before
giving sanction.

Amendment of
Bengal Act II of
1888, sections 235
and 236 (plans).

69. For the purpose of assisting the Engineer in the consideration of applications for sanction, there should be on the staff of the Corporation an officer having architectural qualifications.

70. Power should be given to make a requisition for such information as the Act justifies the officers of the Municipality in asking for; and, if the requisition be not complied with within a reasonable time, the application for sanction might be deemed not to have been made [2].

71. Sections 235 and 236 should be combined. A person intending to build any house or to convert any hut or temporary structure into a house, or to re-build or materially alter the structure of any house, should be required to send in both a site plan and the plan of the house and necessary sections and elevations when applying for sanction. It is desirable that the officers of the Municipality should be able to see at once what is proposed to be done. A site may be suitable for a house built in one way, but not for one built in

[1] Cf. Bombay Act III of 1888, section 347, which is as follows:—

"(1) No person shall commence to erect any building or to execute any such work as is described in section 342—

- (a) until he has given notice of his intention, as hereinbefore required, to erect such building or execute such work and the Commissioner has either intimated his approval of such building or work or failed to intimate his disapproval thereof within the period prescribed in this behalf in section 345 or 346;
- (b) after the expiry of the period of one year prescribed in sections 345 and 346, respectively, for proceeding with the same.

(2) If a person who is entitled under section 345 or 346 to proceed with any building or work fails so to do within the period of one year prescribed in the said sections, respectively, for proceeding with the same, he may at any subsequent time give a fresh notice of his intention to erect such building or execute such work, and thereupon the provisions hereinbefore contained shall apply as if such fresh notice were a first notice of such person's intention."

[2] Cf. Bombay Act III of 1888, section 341.

When work may be
commenced.

(Changes needed in the existing law.)

another way, and, moreover, it will simplify the procedure to require the whole matter to be dealt with at once. At present a site plan is only necessary in the case of building a new house or converting a hut or a temporary structure into a house, but, in our opinion, in order that the regulations may be complied with, it may be equally necessary in the case of re-building or material alteration.

72. Every person intending to erect or re-erect or materially alter any building should make an application in writing to the Committee for sanction to the work, and should submit (in triplicate) complete plans, elevations, and sections of the work to be executed, neatly and accurately drawn to a scale of one-eighth of an inch to a foot; also (in triplicate) a site or block plan, showing the name of the street, the number of the premises and the position of the proposed work in relation to the boundaries of the land on which it is to be executed, and to all adjacent roads, buildings, and premises within a distance of 60 [1] feet of the plot to be built on, drawn to a scale of not less than one-twenty-fifth of an inch to a foot. Such plans should be signed clearly and in a prominent place by the builder who is to erect the building, and by the owner. It should also be provided that on the demand of the Committee the plans must be certified by a surveyor to be licensed by the Committee.

Applications for permission to execute building work.

73. The site plan should show the means of access from the street. No site should be approved unless the passage affording access to the proposed building is at least 9 feet wide, and a passage 16 feet wide should be required where possible. If, however, the applicant has not sufficient land to admit of such a passage being provided, the Municipality should be empowered to assist him to acquire land by taking proceedings at his expense under the Land Acquisition Act.

Means of access.

74. It should be provided that if in any case a piece of building land is so shaped or situated or is of such size that the owner is debarred, by the operation of amendments made by the new Act, from building upon it, the Committee should be empowered to sell the land (with the owner's consent) for his benefit by public auction, an upset price being fixed by the Committee, and owners of adjacent lands being allowed a prior right to buy it at any sum bid over and above such price.

Sale of land which amendments in law make unsuitable for building.

75. The Act should further provide that the plans shall be accompanied by a specification of the work to be constructed, comprising full information as to the following particulars, namely:—

Specification of work.

- [1] (a) the materials and method of construction to be used for external and party walls, foundations, roofs, floors, fireplaces and chimneys;
- (b) the provision, position, and ventilation of drains, water-closets, privies, stables and cow-houses;
- (c) free passage or way in front of the building;
- (d) space to be left about the building to secure a free circulation of air, admission of light, and access for scavenging purposes;
- (e) the manner in which roof and house drainage and surface drainage of land will be disposed of;
- (f) the level at which it is proposed to form all court-yards and open spaces within the holding, and the plinth-level of buildings with reference to the level at the centre of the nearest public street;
- (g) the manner, if any, in which it is proposed to pave the court-yards and open spaces within the holding, and the slopes to which the surface is to be made in each case;

[1] This is necessary, having regard to our recommendation (paragraph 77, *infra*) that a house should not be built within 50 feet of a public latrine or night-soil depot.

[2] The following portions of these clauses are new, namely:—
in clause (a), the words "and method" and the specification of foundations, floors, fire-places and chimneys.

in clause (b), the specification of stables and cow-houses,

clauses (c), (e), (g), (h) and (i).

in clause (d), the references to light and scavenging,

in clause (f), the reference to court-yards,

the concluding clause, as to proportion of site which may be built over.

(Changes needed in the existing law.)

- (h) the means of access that will be available to scavengers to get to service privies;
- (i) the purpose for which the building is to be used when completed; and
- (j) any particulars specified in sections 237 and 243 of the present Act which are not already mentioned above.

The plan of a residential masonry building should be so drawn up that the total area to be covered by all the buildings upon the site shall not exceed two-thirds of the total area of the site.

Retention of first proviso to section 236 of Bengal Act II of 1888 (power of dispensation).

76. We are very doubtful whether the first proviso to section 235, authorising the sanctioning of a site, for special reasons, without reference to its position in relation to any street, should be retained, as to some extent it opens the door to difficulties which have given rise to complaints. If, however, our recommendation (paragraph 44, *supra*) as to the appointment of a small Committee with full powers be adopted, we are not prepared to recommend the repeal of this proviso.

Refusal of sanction to building work.

77. The Act should state *all* the grounds on which sanction to build may be refused, and the refusing authority should state in each case the particular grounds on which it bases its action.

There should be an appeal to the Committee from a refusal.

It will appear from our suggestions as to the Act and bye-laws what the grounds for refusal should be, and it is not necessary for us to detail them here. One of the grounds should be that the building would be within 50 feet of a public latrine or night-soil dépôt, but when a building is disallowed on this ground compensation should be given.

Erection of building on filled-up tank.

78. It should be provided in the Act that no building should be erected on a filled-up tank unless the Engineer to the Corporation has examined the site and given a certificate to the effect that the site is, from a sanitary point of view, fit to be built upon. We think it is unsafe to lay down precisely within what number of years a filled up tank can be built upon^[1]. Everything must depend upon the materials with which the tank has been filled up. A tank which has been properly filled up with broken bricks or such like could be built on almost at once, whereas a tank filled up with refuse could not safely be built upon except after a very long period had elapsed. There would be, as in other cases, an appeal to the Committee from the order of the Engineer refusing a certificate. The absence of such certificate would be a ground for refusing sanction to build.

Right to sue for damages where sanction to building work unlawfully withheld.

79. In addition to the powers contained in section 45 of the Specific Relief Act (I of 1877), a person whose application for permission to build, re-build or alter has been rejected on grounds not authorised by the Municipal Act, not only by the Engineer, but also by the Committee, should have a right to sue the Commissioners for damages; but in giving that right care must be taken not to invite the interference of Courts of law in cases where discretion is left to the Committee.

Suggested definition of "erect or re-erect any building."

80. A good deal of difficulty has arisen with regard to the expressions "new house," "re-build," and "materially alter" in sections 235 and 236. We think that the best way of dealing with this matter is, instead of using the words "build any new house" or "re-build or materially alter the structure of any house," to use the words "erect or re-erect any building," and, as in section 94 of the Punjab Municipal Act (XX of 1891), to enact that "the expression 'erect or re-erect any building,' includes—

- (a) any material alteration or enlargement of any building;
- (b) the conversion into a place for human habitation of any building not originally constructed for human habitation;
- (c) the conversion into more than one place for human habitation of a building originally constructed as one such place;
- (d) the conversion of two or more places of human habitation into a greater number of such places;

[1] Cf. Bye-law (f) 1.

(Changes needed in the existing law.)

- (e) such alterations of the internal arrangements of a building as affect an alteration of its drainage or sanitary arrangements, or affect its security; and
(f) the addition of any rooms, buildings, out-houses, or other structures to any building."

Definition of "material alteration."

81. It is also very desirable that the expression "material alteration" should be defined. It is not an easy task to define it. The best definition we can suggest is the following, which is taken from the Building Regulations of the City of Berlin, namely:—

"'Material alteration' means any alteration of a masonry wall, frame wall, ceiling, iron construction, staircase, shaft for lighting or ventilation, lift-shaft, fire-place or chimney in a building, or any alteration of any projecting part of a building" [1].

Amendment of Bengal Act II of 1888, section 236 (details to be furnished before building).

82. In section 236 the words "as may be deemed requisite" are too indefinite. The words "as may be prescribed" would be preferable.

Amendment of Bengal Act II of 1888, section 237 (applications for permission to build).

83. Section 237 should apply to re-building and material alterations, as well as to the building of new houses.

Amendment of Bengal Act II of 1888, section 238 (applications for permission to build).

84. In section 238, clause (a), the words "or insanitary" should be inserted after the word "unsafe."

Powers of inspection.

85. In order effectually to control the erection of buildings, the Committee, the Engineer, and the officers and agents of the Municipality should be empowered to inspect at all reasonable times, after giving reasonable notice,—

- (a) all buildings in course of erection, re-erection, or alteration, and
(b) all buildings newly erected, re-erected, or altered, provided that the inspection be made during a period of one month after the owner of the building has given notice to the Commissioners or to the Committee that the building has been completed.

Amendment of penal sections of Bengal Act II of 1888.

86. We now come to the penal sections of the Act. They should provide effectually for the punishment of any breach of the Act or of orders lawfully issued under it.

In the opinion of the majority of us, the owner and the builder should be made responsible for all offences against the Act.

Section 242 should render all persons building, re-building or materially altering without sanction or in a way contrary to the Act or bye-laws, or deviating from the sanctioned plan, liable to fine, and also to daily fine. The penalty under section 242 should be raised. At present it is the same as in the case of huts (see section 249).

Demolition of buildings.

87. We think that orders for demolition should be made only by a Magistrate, and, if possible, by a special Magistrate to be appointed under section 422.

The powers of demolition under sections 240 and 241 should apply to every case where building, re-building or alteration is commenced without sanction, and also to every case of deviation from the sanctioned plan, and of breach of the provisions of the Act or of the bye-laws. It should be in the power of the Magistrate to order demolition, and the Police should assist to carry out the order.

We think it also desirable that the Committee, and any persons lawfully acting under their orders, should be indemnified in respect of any action *bond fide* taken by them under the order of a Magistrate directing demolition. One of the difficulties which has arisen in the exercise of the powers which the

[1] Dr. Simpson has suggested the following definition:—

"'Material alteration' means any alteration to the height, width or depth of a building, or any addition to, or encroachment upon or alteration of, the air spaces, interior or exterior, provided by the Act or by the bye-laws"—see Answer No. 208 in Appendix IV.

(Changes needed in the existing law.)

Commissioners now possess, and which has prevented full effect being given to them, is that the slightest act in excess of the powers would give rise to a cause of action, however carefully the Commissioners or their servants may have acted.

Besides the power to require demolition, the Magistrate should have power, on the application of the Committee, to give the owner notice to demolish. In case of his non-compliance with such notice, he should be liable to a daily fine until compliance.

In cases where both demolition and fine are authorised, it should be made clear that both punishments may be enforced.

88. The Committee or Chairman should have power to stop the progress of building operations when the Act or any one of the bye-laws is, or any orders issued under it are, being disobeyed, or pending the decision of the question whether the Act, bye-law, or any such order is being disobeyed. The Committee and Chairman should be indemnified in respect of any such action.

89. Section 243 should apply to the case where a house is being re-built, and, as far as possible, when it is added to or materially altered. The full force of section 236 has been lost by the use of the word "construct" in the first clause of section 243.

90. It may be a question whether, instead of giving under sections 244 and 250 a right to build or re-build, if orders are not issued within 30 days, it would not be better to give the builder a right to compensation in case he proves actual damage [1].

91. Sections 247 to 250 should apply to all huts, whether within or without bustees. As the law at present stands see section 3—definition of "hut"), these sections only apply to huts in bustees.

92. In clause (a) of section 247 the words "or houses" should be added after "huts."

93. Sections 248 and 249 should apply also to material alterations. There should be a power to demolish and fine in case of the commencement of the building, re building, addition or alteration without sanction. There should also be a power to demolish and fine in case of a deviation from the sanctioned plan, or of a breach of the provisions of the Act or of the bye-laws. There should also be a power to stop proceedings, as suggested by us in the case of houses (paragraph 88, *supra*).

94. In section 250 there is apparently a misprint: "house" should be "hut."

95. The plan referred to in section 252 should be drawn to the scale of 25 instead of 40 feet to the inch.

96. In section 292 we would suggest that the word "servico" should be inserted before the word "privy." This section could have no application to connected privies.

In the same section we think that the words "any tank or water-course" should be substituted for "any public tank or a tank used by the inhabitants of any locality."

97. A clause should be added to section 320 (overcrowded dwellings), declaring that 40 superficial feet and 400 cubic feet shall be presumed to be the minimum necessary for each occupant.

98. We will now proceed to consider the existing bye-laws. Except bye-laws 18 to 22 of the Metropolitan Board of Works, which form an Appendix to the Calcutta bye-laws, we think that all the matters dealt with by the bye-laws under the clauses (e) and (r) should form a portion of the Act. They were intended to be of a permanent nature, they deal with matters which

[1] See however our recommendations in paragraph 88, *supra*.

(Changes needed in the existing law.)

would be more properly dealt with by the Legislature, and they would be more likely to be followed to the letter if they formed a portion of the Act. Even if it be not thought fit to transfer the other bye-laws to the Act, bye-laws (c) 19, 20 and 21 should clearly be so transferred.

99. Taking heading (c) first, bye-law 1 will become unnecessary if the suggestions which we have made as to alterations (*supra*, paragraph 80) be adopted.

100. In bye-law 3 it should be explained that a "damp-proof course" may consist of sheet lead, asphalt, slates laid in cement, vitrified bricks, or any other durable material impervious to moisture.

101. In bye-law 4 we recommend that instead of the words "with mortar" there should be the following:—

- "(a) with mortar compounded with lime and sand or other suitable material, or
- (b) with cement, or
- (c) with cement mixed with sand or other suitable material, [1] or
- (d) with stone-lime and ground soorkee, in the proportions of one and two, or
- (e) with ghooting-lime and ground soorkee, in the proportions of one and two."

102. In the opinion of the majority of us, no upper storey should be allowed on a *kutchha-pukka* structure. In the opinion of a smaller majority, the construction of *kutchha-pukka* buildings should not be allowed at all in future. The matter, however, is one of very small importance, only five new buildings and five additional buildings having been constructed with *kutchha-pukka* masonry during the past three years [2].

103. In bye-law 8 we would add after the words "iron foundry" the words "a stable or a cow-shed, or to use any part of a building for any of those purposes."

104. We have already dealt with the matter contained in bye-law 9 when making our suggestions as to the amendment of the Act (see paragraph 67, *supra*). In enacting bye-law 9, the Commissioners attempted to supply a void in the Act; it may be, to say the least of it, doubtful whether they had any power to do so.

105. The Act should provide for the infliction of a penalty on any person who, after having obtained sanction for the erection of a building for any particular purpose, puts the building to any other use without the sanction of the Committee. Such a provision will not, however, be necessary in case our suggestion taken from section 94 of the Panjab Municipal Act (see paragraph 80, *supra*), be adopted.

106. Although we do not think it possible to do much in the direction of improving the appearance and symmetry of Calcutta streets which are at present in existence, we think it might be well to give to the Commissioners in meeting power to determine that no buildings proposed to be erected in any streets to be named by them shall be inferior to, or out of symmetry with, the elevation of adjacent buildings [3]. They might also be empowered to determine that no huts shall be erected in particular streets, to be from time to time specified by them.

107. Bye-laws 10 to 21 should apply to all huts which are being built (whether on new or old sites), re-built or materially altered, whether within or without bustees.

108. The nine feet referred to at the end of bye-law 10 should be measured from eave to eave.

109. A certain amount of confusion arises from the use of the words "road" and "roadway" in bye-laws 10 to 13, as the word "road" is more

Supersession of bye-law (c) 1 (re-building when regarded as new erection).

Amendment of bye-law (c) 3 (damp-proof course).

Amendment of bye-law (c) 4 (joining of walls).

Kutchha-pukka buildings.

Amendment of bye-law (c) 8 (declaration as to use for which building is to be constructed).

Supersession of bye-law (c) 9 (adherence to sanctioned plan).

Penalty for putting building to other than sanctioned use.

Symmetry of buildings in streets.

Extension of bye-laws (c) 10 to 21 (building of huts).

Amendment of bye-law (c) 10 (width of passage between huts).

Substitution of "passage" for "road" and "roadway" in bye-laws (c) 10 to 13 (passages between huts).

[1] Clauses (a) to (e) are taken from the City of Bombay bye-law No. 7, published on the 3rd August 1892 (Paper No. 8 in Appendix I).

[2] See Papers No. 13 in Appendix IX.

[3] Cf. bye-law No. 3 made by the Municipal Commissioners of the City of Madras under section 418 (f) of Madras Act I of 1884. The bye-law is as follows:—

"No building proposed to be erected in any of the following streets shall be inferior to, or out of symmetry with, the elevation of adjacent buildings:—

the Beach Road;
Popham's Broadway;
the Esplanade Road."

(Changes needed in the existing law.)

Amendment of applicable to one of the main roads of the bustee. We would suggest that in these bye-laws the word "passage" should be substituted for the words "road" and "roadway."

Amendment of bye-law (c) 14 (distance of huts from main road): 110. In bye-law 14, instead of the words "above roads," we would suggest that the words "main roads of the bustee" should be used.

Amendment of bye-law (c) 21 (re-building of hut when regarded as new erection). 111. The three feet referred to in bye-law 15 should be measured from eave to eave.

Additional regulations as to huts (height, court-yards and exterior spaces). 112. In bye-law 21 "sides and roof" should be replaced by the words "sides or roof." The use of the word "and" has in practice caused some difficulty, and has led to evasion of the law. [1]

113. We would recommend the following additional regulations with regard to huts:—

Height of huts.—Not more than two storeys should in future be allowed. The maximum height in future allowed should be 18 feet, measured from the top of the plinth to the junction of eaves and wall.

Court-yards for continuous huts.—When two or more huts are built in continuation, there should be a court-yard of not less than one-fourth of the whole area.

Extension of bye-laws (f) 1 to 7 (ventilation and spaces for masonry buildings). *Spaces for roads and passages.*—Power should be given to insist upon proper spaces being left for roads and passages when it is proposed to build several huts on one site.

Supersession of bye-law (f) 2 (height of buildings). 114. To proceed to Part (f) of the bye-laws: in the opinion of the majority this Part should apply to every case, whether a house be newly built, re-erected, or materially altered.

Amendment of bye-law (f) 3 as to court-yards 115. Bye-law 2 will be superseded, by our recommendations (paragraph 50, *supra*) as to the width of streets.

116. The portions of bye-law 3 which relate to court-yards and to the open spaces between houses have received our most careful consideration. The letter written to us by the British Indian Association [2] describes the necessity for these court-yards for religious purposes as well as for the purposes of ventilation. It is obvious that when a very small plot of ground is being built upon very little space can be left for a court-yard, but we think it necessary to prescribe a minimum larger than that prescribed by bye-law 3. We think that the width of the court-yard of a one-storeyed house should be at least equal to the height of the house. In cases of houses more than one storey high, we would adopt the views of Babu Jadu Nath Sen, a builder of great experience in Calcutta. He would make the width the same as the total height of the second and third storeys [3]. In case of a two-storeyed house the width would be the height of the second storeys.

We also think that a court-yard should have an area, in the case of a single-storeyed building, equal to not less than one-fourth of the aggregate floor area of all the rooms abutting thereon, and should not be in any direction less than eight feet across. In the case of a two-storeyed building such court-yard should have an area equal to one-half more than that required for single-storeyed buildings. In the case of a three-storeyed building the court-yard should have an area equal to twice that required for a single-storeyed building, and in that of a four-storeyed building it should be two and-a-half times the area required for a single-storeyed building:

Amendment of bye-law (f) 3 as to exterior spaces. Provided that, if the person intending to form such court-yard so wishes it, the area of the court-yard may be made sufficient on each floor to meet the above requirements, the size being increased at each floor level to the extent necessary to provide the areas laid down.

117. As to the space to be left between a house and the adjacent premises, we think that the rule should be as follows: at the back or sides of a building there should be an open space, extending laterally through the entire width

[1] See Mr. Phelps' answer to Question No. 1 of the 3rd May, 1897 (Paper No. 38 in Appendix V).

[2] Paper No. 13 in Appendix V.

[3] See his Answer No. 366 in Appendix IV.

(Changes needed in the existing law.)

of such building. The distance across such open space from every part of such building to the boundary of any lands or premises immediately opposite or adjoining the site of such building should be—

(a) if the building has a court-yard, then—

not less than 6 feet, if the adjacent building is next to the boundary wall, and

not less than 4 feet, if there is a space of at least 4 feet on the other side of the boundary wall ;

(b) if the building has no court-yard, then not less than 10 feet.

There should be half as much again of space where there are two storeys, twice as much space where there are three storeys, and $2\frac{1}{2}$ times as much space where there are four storeys.

If, however, any side of a building abuts on an open square or the like which is dedicated to public use and is consequently not likely to be built upon, no space should be required on that side.

Babu Nalin Behari Sircar wishes to say that his views on the subject of open spaces are as follow :—

Every masonry building, either newly erected or re-erected, must abut on a public street in its front.

Having regard to the direction of the prevailing winds in Calcutta, every masonry building should have an open space on at least two of its sides for free ventilation. In the case of a building standing on the east of a street running north and south, or standing on the south of a street running east and west, the required open space shall be on its south and east sides. In the case of a building standing on the west of a street running north and south the required open space shall be on the south and north sides of the building, or if standing on the north side of a street running east and west, the required open space shall be on the east and north sides of the building.

The open space on the south side in each case to be at least 6 feet in width, if it is a one-storeyed building.

The open space on east side in each case to be at least 4 feet in width, if it is a one-storeyed building.

The open space on the north side, if no space can be left on its south, to be at least 6 feet ; otherwise it should be at least 4 feet in width.

In the case of two-storeyed buildings, the open space must be at least $1\frac{1}{2}$ times that required for a one-storeyed building.

In the case of three-storeyed buildings the open space must be at least twice that required for a one-storeyed building.

In the case of four-storeyed buildings the open space must be at least $2\frac{1}{2}$ times that required for a one storeyed building, and so on.

The above rule is applicable to buildings with court-yards or interior open spaces.

Buildings having no court-yard or interior open space must have larger open spaces in the exterior thereof than those mentioned above.

118. In the opinion of the majority of us, bye-law No. 8 should not be retained. It is not desirable that there should be discretion given to any one to override the law, and it is clear that this bye-law has been the origin of many, if not of most, of the complaints which have been made as to the action of the Building Committee of the Corporation. Power should however be given to the Committee suggested in paragraph 44, *supra*, to grant dispensations in special cases which are not provided for by the building law. Repeat of bye-law (f) 8 (power of exemption).

119. With reference to the control of the construction of masonry buildings in bustee lands, it is quite clear that regulations are necessary. We recommend the following rules on this subject :— Masonry buildings in bustee lands.

(1) Where a new masonry building is erected in a bustee area, the rule requiring the minimum width of a new street to be 40 feet (see paragraph 51, *supra*) shall apply, the owner of the land being required to give up sufficient land to leave a space of 20 feet between his boundary wall fronting the street and the centre of the street. The land so given up should vest in the Commissioners, and the owner should be compensated therefor.

(2) All masonry buildings must be erected so as to abut on a street of 40 feet, or, where there is no such street, sufficient land must be left, as in the above rule (1), for the making of a street.

(3) Where a hut is removed and a masonry building erected in its place, a space of at least 9 feet should be left all round the new building for ventilation.

(Changes needed in the existing law.)

- (4) Where a new hut is erected adjacent to a masonry building, a pathway of at least 9 feet should be left between the two.
- (5) Where a new masonry building is erected adjacent to a hut, a pathway of at least 9 feet should be left between the two.
- (6) Where a masonry building is erected in a bustee area, the rules as to masonry buildings elsewhere should apply.
- (7) The Corporation should be required to open out roads in bustees as far as practicable, not only for the purpose of securing proper ventilation for huts, but also with a view to the contingency of masonry buildings being erected at a future time.

Privies.

120. We have made special inquiries as to whether the law relating to the construction of privies requires amendment, and whether it is desirable to give further powers to deal with insanitary privies which are now in existence. The proceedings of the Medical Board, with a copy of which we have been favoured^[1], and the answers which we have received to our question No. 16 of the 3rd May, 1897^[2], show that it is imperatively necessary that ampler powers should be given to the authorities. These powers should be given to the Committee, or an appeal should lie to the Committee from the orders of the executive officers. We desire to make the following recommendations on this subject:—

- (1) The powers conferred upon the Commissioners by sections 292 and 294 of the Act should be exerciseable only by the Committee.
- (2) When there is no convenient access from a street, suitable for wheeled traffic, to a privy, the Committee should be empowered to require that a passage at ground-level giving access to the street in front of the building shall be formed. Such passage to be not less than 4 feet wide. It may be open to the sky or covered, but it must be provided with a suitable door. This should be provided for in the Act. The difficulty as regards privies to which there are not sufficient means of access can in most cases be met by requiring the privies to be connected with the sewers^[3].
- (3) A clause should be added to section 286 of the Act authorising the Committee, either in addition to or in lieu of issuing a notice, to prosecute any person whose privy is not kept in good order, and providing for the imposition of a penalty and of a daily fine. The occupier should be held responsible for the proper maintenance of privies, and should be empowered to recover from the landlord the cost of structural alterations made under the direction of the Committee.
- (4) The erection of a dwelling-room over a privy should be prohibited. The present law [bye-law (g)1] provides that no privy shall be constructed underneath a dwelling-room, but there is nothing to prevent a dwelling-room being constructed above a privy.
- (5) No service privy in connection with a building should be constructed at a distance of less than 6 feet from any other building which is or may be used as a dwelling-place, or is a public building, or in which any person is, or is intended to be, employed in any manufacture, trade or business.
- (6) A privy, the total height of which does not exceed 9 feet, may be built in the space at the back of the house.
- (7) It is not necessary to insist upon connected privies being detached from the house. They may properly form part of the house.
- (8) A service privy should not be placed in the space at the back of a building unless there is a space of at least 4 feet between the privy and the wall of the building.

^[1] Papers Nos 24 to 68 in Appendix I.

^[2] Appendix V. These answers show a number of cases in which there is not sufficient access to privies for the purpose of removing the night-soil.

^[3] The policy of converting privies into sewers is not one with which we are concerned, but with regard to it we would refer to paragraph 6 of the letter sent to us by the British Indian Association (Paper No. 13 in Appendix V) and to the answers to Questions Nos. 16 and 17 of the 3rd May, 1897 (Appendix V).

(Changes needed in the existing law.)

- (9) On an upper floor only connected privies should be allowed, but, if in any case it is impracticable to have a connected privy, the Health Officer should have power to authorise a service privy, on such conditions as he may think fit to impose with reference to the increased cost for *mehlers*. All orders of the Health Officer in this connection to be subject to appeal to the Committee.
- (10) Every privy in connection with a building should be provided with an opening of not less than 3 square feet area in the wall for ventilation as near to the top as practicable, and communicating directly with the open air, and should be provided with adequate means for constant ventilation at the floor, eaves, and ridge of such privy.
- (11) The floor of such privy should be flagged or paved with hard tiles or other non-absorbent material, and should be in every part thereof at a height of not less than six inches above the level of the surface of the ground adjoining such privy, and should have a fall or inclination towards the door of such privy of half an inch to the foot.
- (12) Every privy in connection with a building constructed for use in combination with a moveable receptacle for filth should be provided over the whole area of the space immediately beneath the seat of such privy with a flagged or asphalted floor, at a height of not less than three inches above the level of the surface of the ground adjoining such privy; and the whole extent of each side of such space between the floor and the seat should be constructed of flagging, slate, or good brick-work, at least nine inches thick and rendered in good cement or asphalted.
- (13) The seat of such privy, the aperture in such seat, and the space beneath such seat should be constructed of such dimensions as to admit of a moveable receptacle for filth of a capacity not exceeding two cubic feet being placed and fitted beneath such seat in such a manner and in such a position as may effectually prevent the deposit, upon the floor or sides of the space beneath such seat or elsewhere than in such receptacle, of any filth which may from time to time fall or be cast through the aperture in such seat.
- (14) Such privy should be constructed in such a manner as to afford adequate access to the space beneath each seat for the purpose of cleansing such space or of removing therefrom or placing and fitting therein the appropriate receptacle for filth.
- (15) Every privy should be provided with a paved surface for ablution purposes, which should be drained into the drainage system pertaining to the house.

121. We desire to make the following additional recommendations for the amendment of the Act:—

The following buildings should be exempted from the operation of so much of the Act and bye-laws as relates to the erection, re-erection and alteration of buildings, namely:—

- (a) any building erected and used, or intended to be erected and used, exclusively for the purpose of a plant-house, summer-house (not being a dwelling-house), poultry-house or aviary, to be wholly detached and at a distance of ten feet at least from any other building;
- (b) any building erected or intended to be erected by, or with the sanction of, the Commissioners for use solely as a temporary hospital for the reception and treatment of persons suffering from any dangerous infectious disease.

122. In the case of buildings used by the public there should be such number of external doors as the Committee may require, but in the case of private dwellings there need only be one external door for ingress and egress, which should be at least 3 feet 6 inches wide by 7 feet high, measured inside the door-frame.

Certain buildings should be exempted from Act and bye-laws.

External doors.

(Changes needed in the existing law.—Schemes for laying out areas sparsely covered with masonry.)

Model bye-laws.

123. We append to this Report a set of bye-laws ^[1] which have been drawn by the Engineering members of our Commission, and which are recommended for adoption by the Municipal Commissioners, except in so far as they conflict with, or are superseded by, our other recommendations.

Removal, &c. of insanitary buildings.

124. Except that we have recommended that the Committee should have power to compel house-holders to re-construct their privies on a sanitary plan and to provide sufficient access to them for the municipal sweepers (paragraph 120, *supra*), we have not, so far, made any recommendations with regard to existing houses which are not being re-built or altered by their owners. We recommend that the Committee should have, with regard to such houses, powers similar to those given to the President by the City of Madras Municipal Act (Madras Act I of 1884), section 323, which is as follows:—

Powers of President in case of overcrowded buildings, &c.

"323. Whenever the President considers that any block of buildings in the City is, by reason of the manner in which such buildings are crowded together, or of the want of drainage or ventilation, and the impracticability of cleansing, attended with risk of disease to the occupiers thereof or to the inhabitants of the neighbourhood, he may cause a notice to be fixed to some conspicuous part of such block, requiring the owners or occupiers thereof, or, at the option of the President, the owner of the land on which such buildings are erected, within a reasonable time, to be specified in such notice, to execute such works or take such action as the President deems necessary for the prevention of such risk.

If such owners or occupiers neglect to execute such works or take such action within the time specified, the President may, with the sanction of the Governor in Council, cause such works to be executed or such action to be taken in respect of such buildings, and may, if necessary, cause such buildings or any of them to be pulled down. ^[a]All the expenses so incurred shall be recoverable from the owner or occupier in the manner provided in section 437^[a].

In cases where under this section a building is pulled down, the Commissioners shall make to the owner or occupier thereof a reasonable compensation to be ascertained in case of dispute in the manner prescribed in section 438."

We would recommend that these powers should apply not only to a block of buildings, but also to single buildings, that the sanction of the Government should not be necessary, and that there be no demolition except by order of a Magistrate. On the order being made, the demolition should be conducted under the orders of the Committee.

Removal of offensive trades.

125. In our opinion it is necessary for the health and comfort of the inhabitants of the city that the Commissioners in meeting should have the power of removing from the quarters occupied by dwelling-houses such noxious and offensive trades and businesses as they might think fit. In doing so they should be compelled to acquire the land occupied by such trades, but it would be unnecessary to require them to adopt proceedings under the Land Acquisition Act. They should be required to pay compensation for the land and buildings only, adding nothing for anything else, such as good-will. There is no doubt that tanneries, soorkee mills and other mills, places for the storage of hides or rags, and piggeries, ought to be removed from the neighbourhood of residential quarters. It has been suggested to us that cow-sheds and stables should also be so removed, but the nuisance created by them would be more than counter-balanced by the inconvenience which would be caused by their removal.

It is also necessary to prevent dangerous and offensive trades being carried on within a specified distance, say 50 feet, of a dwelling-house.

SCHEMES FOR LAYING OUT AREAS SPARSELY COVERED WITH MASONRY.

Schemes for laying out portions of the town which are sparsely covered with masonry

126. The enactment and strict enforcement of regulations, such as we have suggested, will, we anticipate, prevent an increase of insanitary building and of congested areas. This object would be much aided by a scheme being drawn for the laying out of those portions of the town subject to the Municipality which are at present but sparsely covered with masonry. It is wholly impossible to lay out any scheme with regard to the parts of the town which are extensively built upon ^[2].

^[1] Paper No. 17 in Appendix X.
^[a-a] Added by Madras Act II of 1892, s. 62.

^[2] See Answers to Question No. 29 of the 3rd May, 1897, in Appendix V.

(Opening out of congested areas.)

The gentlemen whom we have consulted agree in considering that it would be possible to frame a general plan for the laying out of the suburban or other portions of the town which are not extensively built upon. In framing such plan it would be possible to provide not only for the width of streets, but how the streets should run, and it would be possible to restrict certain areas to warehouses, business offices, residential quarters, public buildings, and shops, respectively. It is not within the limits of our Commission to specify the details of such a scheme, but we recommend that the necessary powers be given by law to the Commissioners. When such powers are given, it would be for the Committee and officers of the Corporation to elaborate a suitable scheme. The only recommendation we have to make as to the details is that, in any such scheme, it would be advisable that in quarters newly laid out the roads and open spaces should occupy at least as much ground as the building areas [1].

OPENING OUT OF CONGESTED AREAS.

127. It remains for us to consider what steps should be taken with respect to the congested areas. The answers [2] which we have obtained to No. 21 of our Questions of the 3rd May, 1897, and Dr. Pilgrim's report on Wards 22 and 25, [3] will show what areas require opening out. The most notorious examples are to be found in Wards 5 and 7. All the persons consulted agree as to the congestion of Burra Bazar, Jora Bagan, and the neighbourhood of Colootollah. Burra Bazar pre-eminently needs opening out. Throughout Calcutta there are numerous areas which ought to be opened out.

Opening out of congested areas.

The only possible means of opening out these areas are by driving roads through them, and by making open spaces in them [4].

Dr. Simpson in his evidence [5] considered that some portions of the city ought to be demolished. We are quite sure that if such a course were possible it would be to the advantage of the whole community, but we are unable to recommend it, as not only would the cost be prohibitive, but we hesitate to suggest a course which would cause so very much inconvenience to a very large number of persons. For all practical purposes it would be sufficient to give to the Committee the powers we have recommended, and to open out a number of fairly wide streets. Where possible, it would be very desirable also to have open spaces, as lungs to the locality. Advantage might be taken of the existence of unwholesome tanks. They might be acquired, properly filled up, and laid out as are some of the squares in Calcutta. Parcels of bustee land which are in the centre of areas covered with masonry might similarly be acquired and laid out; but, with regard to them, care would have to be taken not to cause unnecessary hardships by the wholesale ejection of communities which might have to go far in search of suitable habitations.

128. We understand that it is not intended that we should express our opinion in detail as to where streets should be constructed, or where spaces should be laid out. If we were to recommend in detail all the streets which we thought desirable, the result might be a very serious increase in the cost of eventually acquiring the land. The land over which the roads would run would, in the prospect of acquisition proceedings, immediately acquire a fictitious value, and it would be very difficult, at the distant time when the land may be acquired for some of these roads, to distinguish between the real value and this fictitious value.

Localities in which streets should be constructed or spaces laid out.

The gentlemen whom we have consulted have made a number of valuable suggestions to us with regard to new roads. They are to be found especially in the answers [6] to Question No. 23 of the 3rd May, and we would

[1] See answers to Question No. 31 of the 3rd May, 1897, in Appendix V.

[2] See Appendix V.

[3] See Papers Nos. 25 and 26 in Appendix I.

[4] See answers to Questions Nos. 22 and 23 of the 3rd May, 1897, in Appendix V. See also answers to Question No. 28, which show that the opening out of Harrison Road and Lansdowne Road has had a beneficial effect on the health of the neighbourhood.

[5] See Appendix IV.

[6] See Appendix V. See also the letter from the Reverend Father V. Marchal, S.J., and the petition from residents of Nimtollah Ghat Street, in Appendix II (Paper Nos. 20 and 22).

(Funds for Improvements.)

also refer to Dr. Pilgrim's suggestions as to roads in Bhowanipur, Kidderpore and Watgunge^[1], and paragraph 22 of Mr. Hughes' note of the 14th January, 1897^[2]. For the following, there is undoubtedly urgent necessity, namely:—

- (a) the widening of Bentinck Street and Chitpur Road,
- (b) the construction of a road running from the north-east corner of Dalhousie Square in a northerly direction through Burra Bazar and Jora Bagan;
- (c) the continuation of Halliday Street to the north, and also to the south as far as Free School Street;
- (d) a street running north in continuation of Loudon Street up to Nebootollah Street.

We may remark that these roads were all suggested by Lieutenant Abercombie to the Fever Hospital Committee, but his suggestions have remained unattended to for over half a century.

FUNDS FOR IMPROVEMENTS.

Cost of improvements how to be met.

129. We now come to the most difficult portion of our task, namely, the consideration of the question of how the cost of any extensive improvements is to be borne.

The principle of betterment should not be adopted.

130. We may at the outset say that, after very careful consideration, we have arrived at the conclusion that it would be unjust to require neighbouring owners or occupiers to pay any portion of the cost of an improvement. There is not in Calcutta any substantial reason why owners of property should be required to give up portions of their property or rights for the improvement of the locality in which their property is situate. It is true that, as far as we can ascertain, the effect of opening out new roads, such as the Harrison Road and the Lansdowne Road, has been not only largely to increase the value of property in their immediate neighbourhood^[3], but also greatly to raise the standard of health in the neighbourhood^[4]. The rise in the value of land is, however, so very uncertain, and subject to so many influences, that it is impossible for us to predict with certainty that land in the neighbourhood of all new streets must necessarily increase in pecuniary value.

It would in many cases be a great hardship to compel an owner to pay for the building of a street which he neither requires nor desires. The opening out of a new street is often as much a benefit to persons away from, as to those residing in the immediate neighbourhood of, the particular locality; and we are unable to say that there should be any deviation from the present system of not putting any greater burden upon the owners of land in the immediate neighbourhood than upon other rate-payers.

The first conclusion arrived at by the Select Committee of the House of Lords, the report of which we annex as Paper No. 11 in Appendix I, was as follows:—

“(1) The principle of betterment, in other words, the principle that persons whose property has clearly been increased in market value by an improvement effected by local authorities should specially contribute to the cost of the improvement, is not in itself unjust, and such persons can equitably be required to do so. But the effect of a public work in raising the value of neighbouring lands is shown by experience to be uncertain. Whether, in any particular case, it is possible for a valuer to pronounce that such an effect has been produced by the completion of any public work, is a point upon which the evidence of eminent valuers differs greatly.”

It has been said that, as the owners or their predecessors are themselves responsible for the congestion, they ought to be made to pay a portion of the costs of improvement, either by way of penalty or by way of being compelled to reimburse to the public the extra profits which they acquired at the expense of proper sanitation. But, having regard to the history of the growth of Calcutta, this view does not commend itself to us.

[1] Papers Nos. 25 and 26 in Appendix I.

[2] Paper No. 20 in Appendix I.

[3] See Answers to Question No. 27 of the 3rd May, 1897, in Appendix V.

[4] See Answers to Question No. 28 of the 3rd May, 1897, in Appendix V.

(Funds for Improvements.)

131. The principle of recoupment [1], which was adopted in section 204 of the present Calcutta Municipal Act, although there may be objections to it, seems to be now almost generally accepted in Calcutta. It is not desirable in any way to extend section 204, but we note that several of those gentlemen whom we have consulted recommend the application of that section. We would, however, make these recommendations, that (1) when the Commissioners desire to acquire any additional land under clause (b) of the section, outside the regular line of a street, the owner shall be at liberty to retain such additional land on paying a "frontage rate" to be fixed by the Corporation, or the capitalised value of such rate, and (2) the sanction of the Local Government should be required in every case under clause (b), and not only, as at present provided, in cases where more than one hundred feet of land are acquired on either side of the regular line of a street.

The principle of recoupment.

The Commissioners should further have power to make a contract with the owner of the land, giving him a right to a surplus of his land which would otherwise have been acquired, on such conditions as to payment of a lump sum or periodical payment as they should think fit. But, in the event of such contract being made, the owner should not be liable to a special frontage rate [2].

A portion of the money required for street improvements could be obtained by acquiring surplus lands and by arrangements with the owners, but there is no doubt that, for any extensive improvements, large sums of money must be forthcoming from elsewhere.

132. We are quite satisfied that it is impossible to raise sufficient money for this purpose by increasing the rates. As it is, house-owners in Calcutta have to bear taxation out of proportion to the burdens which are placed upon the shoulders of owners of other classes of property [3], and it would be inequitable to force house-owners alone to pay the expense of a remedy for the existing evils.

The municipal rates should not be raised, nor municipal funds drawn upon.

The funds available to the Corporation are barely sufficient for the ordinary working expenses and for such improvements as become necessary from year to year, and we are satisfied that their statutory borrowing powers cannot be drawn upon to adequately meet the necessary expenditure. The Administration Report for 1896-97 has satisfied us that it would be impossible to take any money from the funds of the Corporation for the purpose of any large scheme of street construction without seriously interfering with other necessary works of sanitation.

133. So far back as 1803, we have the opinion of the then Governor-General that it was the "duty of Government to contribute in a just proportion to any expense which may be requisite for the purpose of completing the improvements of the town." [4] We submit that now, after the expiration of nearly a century since that minute was signed by the Marquis of Wellesley, it is equally the duty of the Government to come to the aid of the citizens of Calcutta in order to relieve them from the dangers to which they are subject. In the letter written by the Secretary of the Bengal Chamber of Commerce to the Secretary of the Government of Bengal, dated the 4th of January, 1897 [5], the Committee of that Chamber say that "they bear in mind that taxation in the city is almost at a maximum, and that it presses very heavily upon all classes, so that the question of money is one as to which probably the Government may, in the general interests of the Empire, feel called upon to come to the assistance of the city." That it is in the interests of the Empire that Calcutta should be

Funds should be provided by the Government.

[1] The finding of the House of Lords' Committee on the principle of recoupment was as follows:—

"The Committee have received evidence upon what has been called 'recoupment,' that is to say, powers given to a municipal or other public body to take land beyond what is necessary for the actual execution of the work, so that some part at least of the improved value may be secured by the improving public body in case of the burden upon the rate-payers. Some evidence was given by persons who had actual experience of the operation of such a system, the general effect of which was that it had not proved successful; but the Committee are not satisfied that it has ever been tried under circumstances calculated to make it successful, inasmuch as no sufficient power has ever yet been given to local authorities to become possessed of the improved properties without buying out all the trade interests, a course which is inevitably attended with wasteful and extravagant expenditure."

[2] See Mr. Hughes' note dated the 14th of August, 1897 (Paper No. 6 in Appendix VI).

[3] See articles by the late Mr. Robert Knight (Papers No. 7 in Appendix I).

[4] See page 2 of Paper No. 2 in Appendix II.

[5] See Papers No. 9 in Appendix V.

(Funds for Improvements.)

rendered as wholesome as possible, there can be no doubt. A serious epidemic, such as plague, if its ravages extended to Calcutta, would seriously dislocate the whole trade of the East. The Imperial revenues would be impaired, and the damage done to English Commerce, and thus to the interests of England, would be incalculable.

Suggested taxation.

134. Calcutta is a large market, which distributes to the West the products of the East, and receives the products of the West for distribution throughout the Indian Empire. The city itself would by no means be the only sufferer by the destruction of its position in the Commercial and Financial world. It is not inequitable that a tax should be levied from the goods which are sold in the market, for the purpose of keeping up the market. For this reason it is worthy of the consideration of the Government whether some of the taxes to which we will hereafter refer should not be imposed. There is also another reason why Imperial, or at any rate Provincial, revenues should bear a part in reducing Calcutta to order, namely, that for a portion of the year Calcutta is the seat both of the Supreme and of the Local Government.

We take it that neither the Imperial nor the Provincial Government would be able to supply the funds without further taxation, and therefore the question arises, what further taxation is advisable or possible for the purpose?

We had hoped to have received from the Bengal Chamber of Commerce and from the Calcutta Trades Association some recommendations as to how the money is to be provided, but neither of those influential bodies has favoured us with any suggestions, although they each recognise the urgent need for improvements in the city.

It is of course plain that the mere suggestion of any form of taxation must necessarily raise up opposition, and that it would be impossible to devise any scheme which would obtain anything like universal acceptance.

The real question is, what ought to be taxed? The following suggestions which have been made to us are, we think, worthy of consideration:—

Tax on Jute.

- (a) It has been pointed out to us that jute is at present untaxed. As the jute industry is peculiar to Bengal, any tax on it would not unduly hamper Calcutta trade in competition with other parts of India. The tax could be easily and economically levied. We calculate that an anna a maund levied on jute exported from Calcutta and on jute used in the mills in the neighbourhood of Calcutta would produce over sixteen lakhs a year^[1]. On the security of such a tax a large sum could be raised for the purpose of improvements, and we think there can be no valid objection to its being levied. If a tax were imposed on jute exported from Calcutta it would be desirable, not only to impose a tax of similar incidence on jute used in the mills in the neighbourhood of Calcutta, but also, in order to prevent trade being diverted from Calcutta to Chittagong, whence jute is already exported, to levy a similar tax on exports from the latter port. The proceeds of the tax in Chittagong should be employed in improving that port, the funds of which are, it is understood, in need of assistance.

[1] Quantities of raw jute exported from Calcutta to foreign countries during the official years 1893-94 to 1895-96, as shown in returns published by the Bengal Chamber of Commerce:—

	1893-94.	1894-95.	1895-96.
Cwts.	8,001,146	12,222,294	11,360,396
— Maunds of 80 lbs.	11,201,604	17,111,212	15,904,664

The average annual consumption of raw jute in the mills in the neighbourhood of Calcutta between the 1st August, 1893, and the 31st July, 1896, was 7,784,494 Maunds. The estimated consumption from the 1st August, 1896, to the 31st July, 1897, was 9,186,663 Maunds, and the probable consumption between the 1st August, 1897, and the 31st July, 1898, is estimated at 10,869,866 Maunds.

(Funds for Improvements.)

- 3) A tax on opium has been suggested. As to this, Mr. J. G. Aparcau says:— Tax on Opium.

"The money wanted should be obtained in the manner following, among others:—

- (1) Rupees 10 on every chest of opium sold by Government, to be paid by the buyer. This charge alone would enable about a crore of rupees to be borrowed without disorganising the trade in opium. The nature of the trade or speculation in the drug is such that Government would not be affected in their sales in any appreciable degree. The point which I have dealt with, with regard to the Government sales of the drug, is very noticeable; the prices bid at the sales are dependent, not so much on the question of supply and demand of the drug in the market, as on speculations of a gambling character on the part of persons who are interested in the sales."

A similar suggestion was made by the late Mr. Robert Knight in his articles on the condition of Calcutta^[1]. Ten rupees per chest on opium would give nearly four lakhs a year. Opium is largely exported from Bombay as well as from Calcutta^[2], and, if it be decided to levy a tax on this commodity for purposes of municipal improvement in Calcutta, it would be desirable to impose a similar tax in Bombay, in order to prevent the diversion of Calcutta trade to that port. It is understood that large schemes of improvement are under consideration in Bombay, for which funds will be required.

- (c) Indigo and shellac have also been suggested as suitable for taxation, but we do not see our way to recommending the imposition of any tax on these articles. Indigo is largely produced in Java, and is also subject to possible competition with aniline dyes, while shellac is not produced exclusively in Bengal or even in India^[3]. Taxation of indigo and shellac not recommended.

- (d) If the Government were to make over to the Municipality a portion of the tax^[4] on petroleum, that by itself would be almost sufficient. Or the power suggested in clause (h) of this paragraph might be conferred on the Corporation so as to enable them to add six pies per gallon to the import duty levied on petroleum in Calcutta, provision being made for the payment of drawback on exports to the interior.^[5] Tax on petroleum.

- (e) Much might also be done if the Government made over to the Corporation a substantial portion of the canal dues and also the excise duty levied in Calcutta.^[6] We may here note that the Bombay Government contributes large sums of money to the funds of the Bombay Corporation. The amount paid by that Government to the Corporation annually on account of liquor licenses is Rs. 1,43,750, while its annual contribution towards the "general tax" is, at 8 per cent., Rs. 92,587, and towards fire-brigade charges Rs. 5,787. In addition, the income of the Corporation from the municipal duty on tobacco is estimated for the current year at Rs. 2,07,250, and the income from Canal dues and excise duty.

[1] See Papers No. 7 in Appendix I.

[2] The exports of opium in 1895-96 were as follows:—
from Calcutta, 36,390 chests, valued at Rs. 5,04,63,935.
from Bombay, 24,471 " " " Rs. 3,41,29,348.

[3] The exports of indigo in 1895-96 were as follows:—
from Calcutta, 111,714 cwts., valued at Rs. 3,72,38,471.
" Bombay, 7,930 " " " 15,97,366.
" Karschi, 8,646 " " " 9,51,955.

The exports of shellac from Calcutta in 1895-96 were 162,651 cwts., valued at Rs. 1,46,29,689. There are no exports from other Indian ports.

[4] The duty collected on petroleum imported into Calcutta was, in 1895-96, Rs. 25,93,093, and, in 1896-97, Rs. 22,59,329—see Paper No. 11 in Appendix VI.

[5] The exports of petroleum from Calcutta, and from Budge-Budge to places outside Calcutta, are shown in Paper No. 12 in Appendix VI.

[6] The revenue derived in Calcutta from excise was Rs. 4,91,939 in 1895-96 and Rs. 5,41,079 in 1896-97—see Paper No. 14 in Appendix VI. The receipts from canals in Calcutta were Rs. 4,55,503 in 1895-96 and Rs. 4,40,964 in 1896-97—see Paper No. 13 in Appendix VI.

(Funds for Improvements.)

land-conveyance tax, music licenses and sundries at Rs. 25,600, while the estimated yield from town duties during the same year is Rs. 9,13,000.^[1]

Tax on railway passengers.

- (f) In his note of the 14th January, 1897, ^[1] Mr. Hughes suggested a terminal charge on railway and canal goods traffic to and from Calcutta, and a tax on passengers arriving in and leaving Calcutta by rail or sea. We think the second of these suggestions worthy of careful consideration. The Bengal Chamber of Commerce^[2], in objecting to the former charge, say it would be a handicap to the trade of the port as against other Indian ports, and for this reason we would not further press the consideration of this charge; but, with regard to passengers, although the Chamber say that they do not consider that the tax could justifiably be levied, they give no reasons for that opinion, and therefore there can be very little serious objection to the tax. It could be easily levied, would not be seriously felt, and might bring in a large revenue. We beg to refer to Appendix C to Mr. Hughes' note^[3], which contains particulars as to the number of passengers to and from Calcutta during the year 1895-96. Every passenger who arrives in Calcutta derives more or less advantage from the sewage system, the water-supply and other services maintained by the Corporation.

Octroi.

- (g) It has been suggested that the question whether an octroi should not be levied should be re-considered by the Government. This matter has already been considered ^[4]. In 1885 a Committee appointed by the Government were "unanimously of opinion that a complete system of octroi, understanding by the term a cordon of stations or toll-houses round Calcutta for the purpose of levying town dues on articles of consumption generally, was not to be recommended." The only proposal on which they were agreed was that a tax of two annas a case should be levied upon petroleum brought into Calcutta. This, it was calculated, would bring in an annual income of Rs. 94,000. The proposal was agreed to "partly because this revenue can be raised without difficulty or liability to abuse, owing to the rules which are about to be introduced regulating the transport of petroleum by cart or boat, partly because, if the consignees of petroleum find it convenient to store the article in the town itself, instead of conveying it direct from the river-side depôt to the railways which take it up country, there would be no injustice (considering the dangerous character of the commodity) in requiring a small fee to be paid for the use made by its owners of the town and its thoroughfares." With reference to the remark just cited, it may be observed that all petroleum brought to Calcutta is now stored at Budge-Budge, down the river.

If our suggestions for the levy of taxes on jute and railway passengers should not be accepted, we would recommend that the question of imposing an octroi should be seriously considered. The emergency which has to be met is so great that new taxation in some form is absolutely essential.

Continued.

- (h) If sufficient funds should not be obtainable from other sources, power might be given to the Corporation, with the sanction of the Government, to make a small addition for their own benefit to selected taxes. For example, the addition of one or two pies to the four or five pies per rupee which are levied as income-tax might be authorised, the proceeds being handed over to the

^[1] See Papers No. 10 in Appendix VI.

^[2] Paper No. 20 in Appendix I.

^[3] See Paper No. 7 in Appendix V.

^[4] See Papers Nos. 1 and 2 in Appendix VI.

(Modification of law of Land Acquisition.)

Corporation. This system has been adopted in some Continental towns, and its great advantage lies in the fact that the required revenue is raised by means of an existing machinery, and without any appreciable addition to the trouble or cost of collection. The only valid objection to increasing the income-tax that occurs to us is that the measure would add to some extent to the burdens already imposed by the Calcutta Municipal Act upon residential house-owners.

MODIFICATION OF LAW OF LAND ACQUISITION.

135. We are asked to consider whether the special circumstances of Calcutta point to any amendment or modification of the law of land acquisition. Modification of law of land acquisition.

136. Before making specific recommendations on this subject, we desire to recommend that the powers given to the Commissioners in meeting by sections 204 and 268 of Bengal Act II of 1888 be extended. They should, we think, have powers of purchasing land for the purpose of opening out any congested area, or of otherwise improving any portion of the town. Modifications for improving the city.

They should also be empowered to acquire land for the purpose of making it over to a registered company undertaking to effect improvements, or to a private individual giving a similar undertaking if he satisfies the Commissioners that he is able to effect improvements^[1]. Careful provision should, however, be made to prevent undue interference with private interests.

137. The Commissioners in meeting should also have power to acquire land for the purpose of causing or permitting the erection of large sanitary dwellings or barracks similar to the workmen's dwellings in London. We have made inquiries as to whether it would be likely that, if such dwellings were erected, they would be financially successful. Opinions vary a good deal on the subject^[2]. It is not within our province to consider the likelihood of such buildings being successful, but we think it necessary that the Corporation should have power to make the experiment if they should think fit. The materials which we have collected on this subject may be of assistance to them in considering this question. In Bombay, dwellings of the kind have been made for mill operatives, and a small experiment was made in Calcutta by the European and Anglo-Indian Association. There are a great many difficulties connected with the subject, but they do not seem to be insurmountable, and, although there might be some loss of money at the outset, there seems to be no reason why the Municipality should not be able to make lodgings profitable as much as any other landlord. Modifications for erection of sanitary dwellings for the poorer classes.

138. We have not very many suggestions to make with regard to the Land Acquisition Act. Those we desire to make are as follow:— Amendment of the Land Acquisition Act.

(a) In order to avoid some portion of the delay which inevitably takes place, we think the Chairman of the Corporation should be declared to be a "Collector" for the purposes of the Land Acquisition Act. As it is unlikely that he will have sufficient time to perform all the functions of the Collector, he might be empowered to delegate them, or any of them.

(b) As it is important that delay should be avoided in the acquisition of unhealthy areas, power to acquire them at once should be given to the Commissioners^[3]. These powers should only be given where the areas are declared to be unhealthy on the certificate of a Magistrate, granted after hearing any objections raised by persons interested. Provision should be made for the speedy service of notices to such persons and for an early hearing of their objections.

[1] We have made this suggestion in consequence of Mr. Braunfeld's answer to Questions Nos. 22, 23 and 24 of the 3rd May, 1897 (Paper No. 12 in Appendix V).

[2] See answers to Question No. 34 of the 3rd May, 1897, in Appendix V, and also see Appendix VIII.

[3] Cf. section 17 of the Land Acquisition Act (I of 1894).

(Modification of law of Land Acquisition.)

- (c) We think that power should be given to acquire a portion only of a house, manufactory, or other building on payment of compensation for severance. Under the present law, Act I of 1894, section 49, the owner can insist upon the whole building being acquired.
- (d) The extravagant prices which the Corporation has been made to pay for property acquired by it have arisen from the interpretation put by the Courts upon the decision of the High Court of Calcutta in the case of *Premchand Burrel and another v. The Collector of Calcutta*, I. L. R., 2 Calc., 103. The word "market value" occasionally leads to difficulties. It is the price which a willing vendor might be expected to obtain in the open market from a willing purchaser. In the case to which we have referred, it was held that the fairest and most favourable principle of compensation to the owners was to inquire "what is the market value of the property, not according to its present disposition, but laid out in the most lucrative and advantageous way in which the owners could dispose of it." This expression of opinion has induced the Courts to assess lands at a price in excess of what owners would ordinarily have obtained for them in the market. We think it not unfair that for the purposes of land acquisition land should be valued according to its disposition at the time the declaration is made. In the opinion of the majority of us, if it be shown that, before the declaration is made, the owner had taken active steps towards a more favourable disposition of the land, and had spent money for that purpose, further compensation might be given to him, such compensation being based on his actual loss. The value which ought to be paid is the value of the land to the owner, and nothing more. It should, however, also be provided that, where the market value is specially high in consequence of the property being put to a use which is unlawful or is contrary to public policy, *e.g.*, public gaming, the special circumstance shall be disregarded, and compensation shall be calculated on the sum which would be the market value if the property were put to ordinary uses.
- (e) In the opinion of the majority of us it should be provided that twenty-five times the annual value at which the property is assessed for the purpose of municipal taxation shall be presumed to be the market value until the contrary is shown. This provision, however, should not take effect until the particular land has been re-assessed after the passing of the amending Act. Power should be given to re-assess for this purpose. The Hon'ble Mr. Glass thinks twenty-five times the annual value is excessive, but agrees to recommending that rate. Babu Kally Nauth Mitter thinks thirty times the annual value would be fairer.
- (f) In order to prevent to some extent fictitious transactions for the purpose of enhancing the apparent value of property to be acquired, it may be well to exclude evidence of dealings with the property within two years before the declaration. It is of course for the Judge to endeavour to ascertain what the true value of the property is, and to pay no attention to evidence of transactions which have been brought about in contemplation of land acquisition proceedings; but it is often exceedingly difficult to distinguish real from fictitious transactions. The intention of the Municipality is known a long time before proceedings can actually be taken, and we think there can be no real hardship in a provision of the kind we suggest if the owner be compensated for any improvements *bonâ fide* made by him during the two years before the declaration.

(Modification of law of Land Acquisition.—Earthquakes.)

(g) *Clauses fourthly and fifthly of section 23(1) of the Land Acquisition Act should not apply in the case of tanneries, soorkee mills or other offensive trades.*

139. Mr. Hughes considers that, in cases to which it might be applied, the provisions of Michael Angelo Taylor's Act (57 Geo. III, c. 29) should be applied. That Act gave the persons having control over the pavements in a parochial district within the limits of the Act power to alter, widen, &c., streets, and for that purpose to purchase the houses or lands which stood in the way of such altering or widening. There was no provision in the Act for any allowance for a compulsory sale, but Mr. Freeman says, at page 150 of his book on "The Law and Practice of Compensation":—"There seems no sound reason why a claimant whose land is compulsorily taken should not receive the allowance, whether such taking is under the Lands Clauses Act or Taylor's Act, and it is submitted that such allowance should both be claimed and insisted on." The other members of the Commission think there is no necessity for adopting any of the provisions of Michael Angelo Taylor's Act. Michael Angelo Taylor's Act.

140. Mr. Hughes also considers that there should be no statutory allowance in respect of property acquired in unhealthy areas. We have carefully considered the question of statutory allowance, and are not inclined to recommend any alteration of the present law. In some of the English Acts, no allowance is made for compulsory sale. In one [1], a discretion is allowed. Mr. Freeman, in his book to which we have referred, says, at page 41, that in England the allowance for compulsory sale in the case of houses and building land is invariably 10 per cent., while in the case of agricultural land it is usually 25 per cent., and in some of the northern counties rises to 50 per cent. The 15 per cent. fixed by law in this country is, we think, fair. Statutory allowance.

141. The only other suggestion we have to make as to proceedings under the Land Acquisition Act is that, when the amount in dispute between the Corporation and the land-owner exceeds Rs. 5,000, the High Court should exercise the powers of "the Court" under the Land Acquisition Act. In cases of large amount, proceedings in the High Court are less expensive. Moreover, as questions of importance often arise, it is better that the higher tribunal should have original jurisdiction, and we believe that the arrangement which we suggest would be appreciated both by the Corporation and by the owners of property in this city. Conferment of jurisdiction on High Court.

EARTHQUAKES.

142. We have also been asked to consider whether any regulations should be framed with the object of rendering buildings in Calcutta less liable to be damaged by earthquakes. We have obtained a certain amount of information on the subject [2], but are not in a position to recommend that there should be any specific regulations. There is no doubt that the new buildings in Calcutta stood the shock of the recent earthquake better than the old ones. This would tend to show that buildings are now constructed with better materials and workmanship than formerly. The use of good mortar may strengthen a building, but, unless it be required that the main walls be braced with iron tie-rods secured to wall-plates, we know of no rule for the construction of a house which would prevent its being injured by future earthquakes. The special precautions suggested by the gentlemen whom we have consulted would be too expensive to justify their universal application. The ordinary precaution of the use of good materials and workmanship seems to us to be sufficient for all practical purposes. Earthquakes.

In Mr. Foley's Memorandum of the 9th of August, 1897 [3], we were asked to consider the subject of amending the law, so as to provide for the possible contingency of seismic disturbances, or give the Municipal Commissioners wider powers in regard to the nature of the repairs that can be required. We

[1] The Metropolis Management (Thames River Prevention of Floods) Amendment Act, 1879 (42 and Vict., c. 198), section 25.

[2] See Appendix VII.

[3] Paper No. 9 in Appendix VII.

(Conclusion.)

are of opinion that the provisions of section 233 of the present Act (Bengal Act II of 1888), if intelligently worked, are sufficient for the purpose. It might, however, be better to give power to inspect structural repairs, and, if such repairs are not properly done, to pull them down and effect necessary repairs, at the expense of the owner [1]. We propose to deal with section 233 in the draft Bill mentioned in paragraph 143, *infra*.

CONCLUSION.

Conclusion.

143. We have, so far as we can see, answered all the questions which have been referred to us, but we propose to submit a supplementary Report with a draft Bill embodying in legislative form our recommendations for the amendment of the law. We desire, in conclusion, to express our thanks to those Associations and gentlemen who have assisted us, and also to express our obligations to our Secretary, Mr. Wigley, for his valuable services.

E. J. TREVELYAN.

H. H. RISLEY.

J. H. GLASS.

W. R. BRIGHT.

A. J. HUGHES.

KALLY NAUTH MITTER (I agree
in the main and therefore sign the
Report.—K. N. M.)

NALIN BEHARI SIRCAR (I sign
subject to my note of dissent.—
N. B. S.)

H. J. DYSON.

W. BANKS-GWYTHER.

Calcutta, the 23rd December, 1897.

[1] There seems to be some misapprehension as to the construction of section 233—see Babu Priyanath Mullick's answer to Question No. 2 of the 3rd May, 39 (Paper No. 39 in Appendix V).

A DISSENT.

I REGRET to have to differ from my colleagues on one important matter. Point of difference.
I cannot persuade myself to agree in the recommendation made in paragraph 44 of this Report that "the powers now possessed by the Commissioners to control the action of the Executive with regard to the erection of buildings, the enforcement of building regulations and the protection of streets from encroachment, together with such further powers in the same behalf as may be considered necessary, should be entrusted to a small Committee, to whom only an appeal should lie from the action of the Executive Officers. This Committee should be entirely independent of the general body of the Commissioners, and their decisions, when in accordance with law, should be final."

By this recommendation it is proposed to invest a small Committee with the power of general control over the Executive, which the Commissioners as a body have now been exercising for over 20 years, since the introduction of the elective system in Calcutta. The proposal is objectionable, as it appears to be subversive of one of the fundamental principles of local self-government, namely, that the Corporate body should in all respects have powers of general control,—a principle which forms the basis of the present system of municipal law in Calcutta, and which, I believe, is recognised by all civilized countries, at the present day, as an essential element of real municipal government. In this connection I cannot refrain from quoting the following passage from an interesting little book by Albert Shaw, entitled "Municipal Government in Continental Europe." Writing about German Municipal Councils he says:—

"However peculiar in a hundred details the German system may be, it is like the English and the French systems in the main fact that the voters elect a representative common council, of considerable size and sitting in one chamber, *which has in its hands for exercise directly or indirectly the whole authority that exists in the municipality.* It is a body large enough to contain men of various opinions, and it acts openly, with full responsibility."

There do not appear to be any reasonable grounds for so radical a change as would divest the Corporation of such important powers in regard to the working of the Building Regulations; nor have I been able to find any justification for it amongst the mass of evidence placed before the Commission. First objection: the transfer of power of control from the Commissioners as a body to a small Committee is unjustifiable and unnecessary.
The Building Committee has, indeed, been accused by some of having abused the discretionary power given to the Commissioners under bye-law (f) 8; and in paragraph 41 of this Report, enumerating the main defects in the present Act and bye-laws, it is stated "that the Building Committee of the Commissioners is too large a body for the purpose of dealing with questions relating to buildings," and "that bye-law (f) 8 is too wide in its terms." To remedy these defects the number of Members of the Building Committee might be reduced by law to 5 or 6, as proposed to be done in the case of the small Committee referred to above; and bye-law (f) 8 itself might be repealed, as recommended in paragraph 118. What necessity is there, then, to divest the Commissioners as a body of their legitimate function of general control, which they have exercised not only over Executive Officers but also over the various Committees appointed by them, under sections 63 and 65 of the Act, to help the Executive in the discharge of their multifarious duties involving intricate questions which require local knowledge and experience for their speedy and successful solution. Many instances will be found in the recorded proceedings of the Corporation where the Commissioners-in-meeting have found fault with the decisions of Committees and have upset them altogether. That there are generally to be found, on the part of the Commissioners as a body, a spirit of independence and impartiality, a desire to deal out even-handed justice to all parties and a tendency to uphold the Executive, will, I believe, be recognised by all who have taken

any interest in or who have watched the proceedings of the Calcutta Corporation. I firmly believe that it is much safer to entrust the real and final controlling powers to a larger body, composed of persons from different sections of the community and representing varied interests, than to a smaller number of men. And it will, no doubt, be admitted by all who have experience of municipal affairs that a large body of representative men is more likely to deal justly and impartially with public matters than a small number of men who are consequently more liable to be influenced by party and personal considerations.

Second objection: some of the powers assigned to the Committee would lead to serious administrative inconvenience.

Great stress is laid by some upon the evils of canvassing, but it is apparently much easier and more convenient to canvass successfully a small than a large number of men.

My next objection is that the powers assigned to this small Committee are such as would lead to confusion and, in some instances, to serious administrative inconvenience, causing great delay in the transaction of the ordinary municipal work. It will be observed that the Committee is to exercise original jurisdiction in some cases and appellate powers in others. With regard to "the erection of buildings, the enforcement of building regulations and the protection of streets from encroachment," the Committee, it is recommended, will exercise only appellate jurisdiction, the Executive exercising original powers. But in regard to sections 206 (allowing to build within the regular line of street, paragraph 57), 212 (removing obstructions or encroachments on public street, paragraph 61) and 223 (allowing supported verandahs to be erected and contracting for rent for same, paragraphs 64 and 65), also in determining whether a building may be sanctioned or not, if no orders have been issued by the Executive within the prescribed period (paragraph 68), in selling lands which amendments in law make unsuitable for building (paragraph 74) and in stopping progress of building operations (paragraph 88), the Committee is to be empowered to act in the first instance. Similarly, as regards the construction of new privies and dealing with old and insanitary ones now in existence, it is recommended (paragraph 120) that—

"the powers conferred upon the Commissioners by sections 292 and 294 of the Act should be exercisable only by the Committee.

"when there is no convenient access from a street, suitable for wheeled traffic, to a privy, the Committee should be empowered to require that a passage at ground-level giving access to the street in front of the building shall be formed.

"a clause should be added to section 286 of the Act authorising the Committee, either in addition to or in lieu of issuing a notice, to prosecute any person whose privy is not kept in good order, and providing for the imposition of a penalty and of a daily fine."

Further, it is recommended (paragraph 124) that "whenever any building or block of buildings in the City is, by reason of the manner in which such buildings are crowded together, or of the want of drainage or ventilation, and the impracticability of cleansing, attended with risk of disease to the occupiers thereof or to the inhabitants of the neighbourhood," the Committee should have power "to cause a notice to be fixed to some conspicuous part of such block, requiring the owners or occupiers thereof, within a reasonable time, to be specified in such notice, to execute such works or take such action as the Committee may deem necessary for the prevention of such risk," and that "if such owners or occupiers neglect to execute such works or take such action within the time specified, the Committee may cause such works to be executed or such action to be taken in respect of such buildings, and may, if necessary, cause such buildings or any of them to be pulled down" under orders of a Magistrate.

No provision for appeal, however, has been recommended in any of these cases; unless it be intended that the Committee will exercise both original and appellate jurisdiction,—a condition of things which would be highly objectionable on principle.

Again, although it is recommended that with regard to "the enforcement of building regulations" the Committee will exercise only appellate jurisdiction,

the power to prosecute for infringements of the building laws (sections 242 and 249), and to apply for orders for demolition of buildings (sections 240, 241 and 248) are recommended to be exercised only by the Committee (paragraph 44). Under the present law all these powers, although vested in the Commissioners, are, as a matter of fact, daily exercised by the Chairman of the Corporation, under section 61 of the Act, subject to the general control of the Commissioners-in-meeting. The recommendation made in this report, however, will have the effect of transferring such powers from the Chairman to the small Committee, without any control whatever on the part of any other authority; this, it is feared, will lead to serious administrative inconvenience.

In every case of prosecution and demolition under Chapter X of the Act ("Streets and Building regulations") a meeting of the Committee will have to be called, and the matter will have to be discussed on its merits before any decision is arrived at; and, when one takes into consideration the number of such prosecutions instituted every year, the impracticability of the proposal will be apparent. Last year the number of such prosecutions in the Town proper was 2,928^[1] and in the added area 212^[2], aggregating 3,140. As for demolition, the order to demolish is at present issued by the Chairman. It is now recommended that such orders should be made only by a Magistrate (paragraph 87) and that the application to the Magistrate for such orders should be made only by the Committee (paragraph 44, second sub-paragraph). Last year the number of notices issued for demolition under different sections of Chapter X was 1,812^[3] in the Town proper and 157^[4] in added area, aggregating 1,969; and if police help were forthcoming the Chairman himself could have enforced his orders in as many cases as he might have thought necessary. The proposed Committee will now determine the cases in respect of which applications for orders for demolition will have to be made before a Magistrate, and the Magistrate, as usual, will not issue any orders unless he has taken down the evidence of both parties to the case. Thus the procedure recommended is certainly no improvement upon the present method of working; it must, in the nature of things, be cumbrous and dilatory.

With regard to privies, the Committee will be authorized, in addition to or in lieu of issuing notices, to prosecute under section 286. The notices issued under this section during last year were 3,693^[5] in number in the Town proper and 1,195^[6] in the added area, aggregating 4,888; and it is in connection with these notices that the Committee will have to exercise its discretionary power of prosecution. This is doubtless very onerous work for the small Committee.

Altogether, the proposed system will introduce in my opinion a complicated procedure, which will certainly not facilitate despatch of municipal business.

My third objection to the proposed Committee is in respect of its constitution. The Engineer of the Corporation will be one of its members, and it is the Engineer with whom the power of giving or refusing sanction would lie in the first instance (paragraph 68). Under the present law the Chairman is the only Executive Officer who is authorized to join the Commissioners in their deliberations and to have a voice in them; he is looked upon as the sole representative of the whole Executive machinery; and the Engineer, though an important functionary, has always been subordinate to the Chairman. To single out the Engineer and give him a voice and vote in the direction and settlement of affairs, particularly when the appeal is against his orders, seems to me to be open to objection and is certainly a great departure from the traditions of municipal government in Calcutta. If then the Engineer is to have a place on this small Committee, why should "the Health Officer be subordinate to the

Third objection: defective constitution; preponderance of the official element.

[1]	Calcutta Municipal Administration Report, 1896-97, Part II, page 242.
[2]	Ditto ditto, ditto, page 269.
[3]	Ditto ditto, ditto, page 242.
[4]	Ditto ditto, ditto, page 253.
[5]	Ditto ditto, ditto, page 347.
[6]	Ditto ditto, ditto, page 350.

Committee," as observed at the end of paragraph 44 of the Report. Is the Health Officer as important an Officer of the Corporation as the Engineer?

Besides the Chairman and the Engineer, there will be three Commissioners on the Committee—two to be elected by the general body of Commissioners, and the third to be nominated by the Local Government. The appointment of one of the members of a Committee of the Corporation by the Local Government is another departure from the practice hitherto followed, and is also objectionable in principle. Either all the three Commissioner-members should be elected by the general body of Commissioners or two should be elected by the elected Commissioners and the third by the nominated Commissioners, following the present procedure in the case of the General Committee, under section 63 of the Act. In any case, the election to the proposed small Committee from amongst the Commissioners should be made by themselves and not by any authority external to the Corporation, even though it be the Local Government.

The constitution of the small Committee, as recommended, will, I am afraid, be such as would tend to make the official majority preponderate: the Chairman is an official; so is the Engineer; and so most likely will be the Government nominee, for he will practically be the Chairman's nominee. For a Committee so constituted to dispose of appeals against the action of the Executive Officers would be, to say the least, little short of a farce.

If it be intended to give to the residents of this town a real Committee of Appeal against the action of the Municipal Executive Officers, it is far better that it should consist of independent and unprejudiced persons, unconnected with the Municipality and possessing the requisite technical knowledge, than that it should be the sort of Committee recommended in this Report. In London, under the London Building Act, 1894, section 175, the tribunal of appeal consists of "one member appointed by a Secretary of State; one member appointed by the Council of the Royal Institute of British Architects, and one member appointed by the Council of the Surveyors' Institution." The section distinctly lays down that "no member or officer of the Council (the London County Council) shall be a member of the tribunal of appeal."

Recommendation.

Having regard to all the circumstances of the case, I am decidedly of opinion that there is no necessity for any change in the present methods of working the building regulations, so far as the Committee of the Corporation is concerned; and would recommend that matters be left much as they are, except that the number of members of the Building Committee may be reduced to six (four being elected and two nominated Commissioners, with the Chairman of the Corporation as President), and the discretionary powers given to the Commissioners repealed from both the Act and the bye-laws. Such Committee, of course, to be subject to the general revisionary powers of the Commissioners-in-meeting, as at present.

I would strongly object to any powers being given to the proposed small Committee "to grant dispensations in special cases which are not provided for by the building law" as recommended at the end of paragraph 118. What guarantee is there that "in granting dispensations in special cases" the Committee will not override the law? To whom will they be accountable? Who will put them right if they do override the law?

Complaints against Building Committee much exaggerated.

Reference has been made in this Report (paragraph 118) to "the complaints which have been made as to the action of the Building Committee of the Corporation." Most of the complaints have been made by Dr. Simpson; and in my opinion it would have been better to have enquired into them from the records of the Corporation; for I believe such an enquiry would have cleared up many misapprehensions that now exist on the subject. It will, however, not be out of place in this Note of Dissent to embody a few figures taken from the Administration Reports of the Municipality, showing how far the alleged interference with the Executive is consistent with the facts of the case. The following table will show the number of applications for sanction to building dealt with by the Executive, the number of such applications

sanctioned, and the number of cases brought up before the Building Committee:—

		Number of applica- tions for sanction.		Number of applica- tions sanctioned.		Number of cases brought up before Building Com- mittee.
		Pucca buildings.	Kutchu huts.	Pucca buildings.	Kutchu huts.	Pucca buildings and kutchu huts.
1892-93 [1]	...	2,327	+ 3,136	874	+ 1,560	198
		5,463		2,434		
1893-94 [2]	...	2,539	+ 8,470	954	+ 1,274	107
		6,009		2,228		
1894-95 [3]	...	2,334	+ 3,397	840	+ 1,123	118
		5,731		1,963		
1895-96 [4]	...	2,188	+ 3,044	716	+ 995	170
		5,232		1,711		
1896-97 [5]	...	2,229	+ 2,910	776	+ 887	134
		5,139		1,663		

From the above it will be abundantly clear that only a small proportion of Building cases actually came up before the Building Committee as appeals against the orders of the Executive; and if these cases were carefully analysed it would appear that most of these appeals were not only well grounded but amply justified.

NALIN BEHARI SIRCAR.

The 24th December, 1897.

[1] Calcutta Municipal Administration Report for 1892-93, Part ii, page 92.
 [2] Ditto ditto 1893-94 " " 87.
 [3] Ditto ditto 1894-95 " pages 98 and 99.
 [4] Ditto ditto 1895-96 " " 91 and 92.
 [5] Ditto ditto 1896-97 " " 241 and 242.

OPENING OF AGRICULTURAL CLASS AT SIBPUR COLLEGE.

REVENUE DEPARTMENT, AGRICULTURE No. 1141.

Calcutta, the 15th March 1898.

RESOLUTION.

READ the following papers--

- (1) Notes by Mr. M. Finucane, C.S., Director of the Department of Land Records and Agriculture, Bengal, dated 23rd January 1888, and other notes ending with a note written in May 1892 by Mr. J. Slater, Principal of the Sibpur Engineering College, on the subject of establishment of an Agricultural course of study at the Sibpur College
- (2) Chapter XIX of Dr. J. A. Voelker's Report on the Improvement of Indian Agriculture, published in March 1893.
- (3) Resolutions II, VI, VII, VIII, of the Fifth Meeting of the Agricultural Conference held at Simla in October 1893.
- (4) Notes of Proceedings of the Agricultural Conference held in Calcutta in January and February 1896, so far as they relate to agricultural education.
- (5) Paragraphs 11, 16 and 17 of this Government's letter in the Revenue Department, No. 680T.R., dated 24th June 1896, addressed to the Government of India.
- (6) Paragraphs 5, 7 and 8 of this Government's letter in the Revenue Department, No. 687T.R., dated 30th June 1896, and letter No. 698T.R. of same date, addressed to the Board of Revenue, Lower Provinces.
- (7) Paragraphs 4 and 5 of this Government's letter in the Revenue Department, No. 692T.R., dated 30th June 1896, addressed to the Director of Public Instruction, Bengal
- (8) This Government's letter in the Revenue Department, No. 696T.R., dated 30th June 1896, addressed to the Secretary to the Government of Bengal in the Public Works Department
- (9) Letter No. 828B., dated 5th September 1896, addressed to this Government by the Board of Revenue.
- (10) Paragraphs 38 to 39 of the Resolution of the Government of India on Agricultural Education, dated 20th March 1897.
- (11) Letter No. 2043, dated 24th March 1897, addressed to the Government by the Director of Public Instruction, Bengal.
- (12) This Government letter in the Revenue Department, No. 1588, dated 14th April 1897, addressed to the Government of India
- (13) Paragraph 7 of letter No. 730, dated 18th May 1897, from the Government of India, addressed to this Government.
- (14) This Government's letter No. 509, dated 9th June 1897, addressed to the Government of India, and subsequent correspondence ending with Memorandum No. 1276, dated 21st August 1897, from the Government of India, communicating the sanction of Her Majesty's Secretary of State for India to the appointment of an Agricultural Lecturer for the Sibpur College.
- (15) Letter No. 34T.A., dated 23rd September 1897, from the Director of the Department of Land Records and Agriculture, submitting proposals for opening Agricultural Classes in the Sibpur College.

RESOLUTION.—Proposals for the establishment of Agricultural Classes in the Sibpur Engineering College were made in 1888 by the then Director of the Department of Land Records and Agriculture, Bengal, in connection with the enquiries of the Committee which was appointed in 1887 to report on the working of the Sibpur Engineering College. The Director's recommendations were endorsed by the Committee, and were further developed in 1892 in consultation with Mr. J. Slater, Principal of the Sibpur College. No orders were passed by Government on these proposals, however, pending consideration of the Report of Dr. J. A. Voelker, who had been deputed by the Secretary of State for India to advise on the best course to be adopted in order to apply the teachings of Agricultural Chemistry, and in order to effect improvements in Indian Agriculture.

2. In considering the need for, and the advantages of providing higher education in agriculture, Dr. Voelcker expressed the opinion that it is not advisable, at present, to establish special Agricultural Colleges, but that it will be better to utilize existing colleges of science, and to add agriculture to the subjects taught in such colleges. He recommended also that Universities should encourage the study of agriculture by making it an optional subject in the course for a degree, and that the claims of men who have passed examinations in agriculture should be fully recognized for appointments in the Revenue and cognate Departments. These conclusions were discussed at a general conference of officers of the Agricultural Departments convened at Simla in October 1893, and were held to be included in the Resolutions previously passed at the fifth meeting of an Agricultural Conference held at Simla in 1890. The four Resolutions of the Simla Conference of 1893, which had a direct bearing on the proposal to open classes at Sibpur for the teaching of agriculture and allied subjects, were as follows :—

That, as a general rule, instruction in agriculture should be combined with the existing course of education, and not depend exclusively on separate special institutions.

That it is highly desirable that the claims of men trained in scientific agriculture to appointments in the Revenue and cognate Departments should be as freely recognized as those of men trained in Law, Art, and Engineering.

That where appointments in the Revenue and cognate Departments are made on the result of the competitive examinations, scientific agriculture should be included as an optional or necessary subject in the examination course.

That in any province in which it may be determined to introduce a scheme for higher agricultural education, no arrangements will be satisfactory which do not provide (1) for a thorough practical training of the students in the field and laboratory, as distinct from theory or practice as taught in the lecture, and (2) for examination tests of a special and searching nature in the above branches of work.

Before issuing orders on the proposals and recommendations of the Agricultural Conference of 1893, the Government of India decided that the views and wishes of the Local Governments should be more definitely ascertained, and for this purpose, Sir Edward Buck, Secretary to the Government of India in the Department of Revenue and Agriculture, was placed on special duty, and met the delegates of the Bengal Government in January 1896 at Calcutta. At this Conference, the scheme of 1892 for the establishment of an Agricultural College was accepted, with some slight modifications; and in paragraph 17 of this Government's letter No. 630 F.R. of the 24th June 1896, the sanction of the Government of India was solicited to the early formation of agricultural classes at Sibpur, and to the appointment of an Agricultural Lecturer. The sanction of Her Majesty's Secretary of State for India to the appointment of an Agricultural Lecturer at Sibpur College was communicated to this Government with the endorsement Nos. 1131—48-7, dated 24th July 1897, from the Government of India. It has been decided that the agricultural classes will be opened at Sibpur from June 1898.

3. The scheme of agricultural education to be provided at Sibpur includes two classes. The course of study to be followed by students in the upper class, qualifying for the higher diploma, is intended to train students for employment in the higher branches of the Revenue and cognate services, or for employment as managers and sub-managers of estates, or as tahsildars and land stewards. The course of study for the lower class will be suitable for candidates for the office of kanungo and other subordinate posts in the Revenue service. The theoretical course for both classes will be limited to 14 months, including vacations, from June of one year to August of the next. During the eight months from November of the second year to the following June, it is contemplated that the students of both classes will receive practical instruction on the Sibpur farm, as probationers on Government and Court of Wards' estates, and that they will make excursions to the Burdwan and Dumraon experimental farms. Dr. Leather, who was recently Agricultural Chemist to the Government of India, has also suggested that the students should visit the Allahabad and Cawnpore Farms, and Mr. Keventer's Dairy Farm at Aligarh.

The higher course of study will be open to students of the Engineering College who have passed the F. E. examination at the end of their third year, who will already have studied chemistry, physics, mathematics, surveying,

levelling and drawing. It may be also arranged so far as the available accommodation will permit, to admit to this class B.A.'s nominated by Government who have passed by the B course or other students of sufficient educational attainments so nominated. The subjects to be taught in the upper class during the 14 months' course of agricultural study are agriculture, organic and agricultural chemistry and laboratory work, botany, physiography, geology, meteorology, hydraulics, book-keeping and zamindari accounts. Arrangements may be made for students to attend lectures in veterinary science at the Veterinary College, and special lectures will be given on the culture of lac, indigo, sugar, &c., as shown in Appendix A to this Resolution.

The syllabus of lectures prepared by Mr. Mukherji and revised by Dr. Leather, late Agricultural Chemist to the Government of India, which is printed as Appendix A to this Resolution, is provisionally approved, but will be subject to such modification as may be found necessary. The lower course of study will be open to students of the College who have completed their second year in the apprentice department, and to teachers sent from training schools with the sanction of the Director of Public Instruction. The course will include agriculture, surveying, work-shop practice, botany, and zamindari accounts. At the close of their terms of theoretical study, the students of both classes will be examined in the subjects prescribed in their course, and successful students will receive from the Principal of the College, in the higher class, a diploma; in the lower, a certificate of proficiency. On the conclusion of the further term of practical training, and after further examination, the diplomas and certificates of those students who satisfy the examiners will be countersigned by the Director of the Department of Land Records and Agriculture, and will then qualify the holders for employment in the higher or lower grades of the Revenue and cognate services.

4. His Honour the Lieutenant-Governor is prepared to assign one appointment annually in the Provincial Executive Service, and one in the Subordinate Executive Service to such of the holders of agricultural diplomas as he may think most deserving of and suitable for these appointments, and will also consider favourably applications for nominations to be given to such students, authorizing them to compete at the examinations for candidates for admission to the Provincial, Executive and Opium Services, provided the applicants are, in other respects, considered by him to be suitable for admission to these services. Students who hold certificates of proficiency in agriculture will be eligible for employment in the subordinate services as kanungos, in the Canal Department, and under the Court of Wards, and as normal school teachers. But it is not possible, at present, to state how many such appointments can be given each year to the holders of agricultural certificates.

5. For the present, students in the agricultural classes will not be required to pay tuition fees, but board, lodging, and lighting must be paid for at the ordinary scale; accommodation for students will be provided in the hostel attached to the College.

Senior scholarships held by students when passing the F.E. examination will continue to be tenable in the agricultural classes during the fourth year: the number of such scholarships at present open to all the senior students of the Sibpur College is 10, viz. 1 of Rs. 20 a month, 3 of Rs. 15 a month, 6 of Rs. 10 a month. In addition to these scholarships, one graduate scholarship of Rs. 80 a month, tenable in the fifth year, will be awarded on the result of the fourth-year examination. To students of the apprentice department who join the agricultural classes, ten reduced feeships of Rs. 2 a month will be allotted, tenable during the 14 months of their theoretical training. During the final year of training, four stipends of Rs. 10 a month will be awarded on the results of the final agricultural examination.

6. The initial expenditure on apparatus necessary for the opening of the classes will be Rs. 7,000, viz.—

	Ra.			
Chemical apparatus	5,000
Botanical apparatus	1,500
Furniture	500

A provision of Rs. 10,000 has been made in the Education Budget for 1897-98, from which this expenditure will be met.

The annual cost of the classes will be about Rs. 10,000, and will be met from the Education Budget: the details are as follows:—

	Rs.	Rs.
(1) Lecturer in Agriculture and Agricultural Chemistry on ...	300 + 100	4,800
(2) Allowance to Assistant Lecturer in Chemistry on ...	150	1,800
(3) Allowance to Lecturer in Botany ...	100	1,200
(4) Allowance to assistant for chemical and botanical laboratory ...	15	180
(5) { One servant ...	8	96
(6) { One daftri ...	10	120
(7) Contingencies and miscellaneous ...	...	1,804
		<u>10,000</u>

7. The whole control of the teaching staff and establishment will be with the Principal of the Sibpur College, but the nomination of the Agricultural Lecturer will be left to the Director of Land Records, who will also be Official Visitor of the agricultural classes. The Agricultural Lecturer will, on this occasion, be taken from the staff of Deputy Collectors, and will draw his grade pay *plus* a special allowance of Rs. 100 a month, and to fill the vacancy caused by his deputation, a new appointment will be added in the Rs. 300 grade. The Lieutenant-Governor has appointed Mr. Nitya Gopal Mukherji, a graduate of Cirencester, and, at present, Assistant Director of the Bengal Agricultural Department, to the post of Agricultural Lecturer.

8. The Lieutenant-Governor has much pleasure in sanctioning the opening of these agricultural classes at Sibpur College. They will complete a scheme which Sir Alexander Mackenzie has had much at heart, viz., the expansion of that institution into a thoroughly equipped School of Technical Instruction, where young men can be trained to take part in the development of the resources of Bengal, whether as Civil Engineers, Mechanical Engineers, Mining Engineers, Electrical Engineers, or Agricultural experts.

By order of the Lieutenant-Governor of Bengal,

M. FINUCANE,

Secretary to the Government of Bengal.

Appendix A referred to in paragraph 3 of the Bengal Government's Resolution No. 1141 Agri., dated 15th March 1893.

SYLLABUS OF STUDY.

1. LECTURES ON THE SCIENCE AND PRACTICE OF AGRICULTURE.

For each Class separately, by the Lecturer on Agriculture.

The soil.—Geological strata; surface geology of Bengal districts; formation of soils physical and chemical classification of soils; fertility and barrenness; cultivation of soils (20 lectures.)

Crops.—Botanical classification of Bengal crops; economic classification of the crops; chemical composition of the principal crops; suitability of crops to soils; description of the principal crops, cereals, fibres, root-crops, oil-seeds, vegetables, spices, drugs, and dyes. (35 lectures.)

Rotations.—Systems of rotation; systems of farming. (5 lectures.)

Climate.—Laws of climate as affecting plant life; influence of rainfall, light, heat, cold, air and electricity on cultivation. (5 lectures.)

Seed.—Selection, pedigreeing; pickling. (2 lectures.)

Manures.—General and special manures; classification into nitrogenous, phosphatic, potassic, and calcareous; methods of conserving and applying manures; adaptation of manures to soil; adaptation of manures to different crops. (16 lectures.)

Prime-movers.—Relative value of human power and horse, wind, water and steam powers. (1 lecture)

Implements.—Farm implements; dairy implements. (6 lectures.)

Farm animals.—Breeding, management and treatment in disease and during epidemics. (10 lectures.)

Feeding substances.—Human food and animal fodder, their feeding and manurial values. (5 lectures.)

Propagation of trees.—Physical and economical advantages; methods of propagation; description of trees yielding food, fibres, &c. (5 lectures.)

Management of Farms and Estates.—(10 lectures.)

Special subjects.—Indigo. (5 lectures.)

Lac. (2 lectures.)

Opium. (3 lectures.)

Bee-keeping. (3 lectures.)

Pisciculture. (5 lectures.)

Sericulture. (20 lectures.)

Agricultural Zoology. (10 lectures.)

Dairying. (8 lectures.)

Sugar. (4 lectures.)

Total ... 160 lectures for each class.

2.—FARM CLASSES.

Each Class to go out once a week with the Lecturer on Agriculture, and twice a week with the Farm Overseer.

3.—WORKSHOP PRACTICE.

Eight hours a week for the Lower Class only, under the general supervision of the Foreman. Construction of hurdles, *dons*, ploughs, hoes, drills, pumps and windmills.

4.—LECTURES ON ORGANIC CHEMISTRY.

For the Higher Class only, by the Professor of Chemistry. General principles of combination in organic chemistry; groups of compounds; the chemistry of the principal organic compounds. (40 lectures.)

5.—LECTURES ON AGRICULTURAL CHEMISTRY.

For the Higher Class only, by the Lecturer on Agriculture.

Chemical processes concerned in germination, growth and maturation of plants; weathering of soils; chemistry of manuring, digestion and fermentation; composition of soils, crops, manures and feeding stuffs. (50 lectures.)

6.—LABORATORY ANALYSIS.

For the Higher Class only, under the supervision of the Professor of Chemistry.

Chemical manipulation; group-tests; quantitative analysis of saltpetre, bone-manure, water, milk, soil, oil-cakes, feeding-stuffs and manures. (9 hours a week.)

7. LECTURES ON BOTANY.

For both Classes together, by the Professor of Botany.

Nutritive organs of plants, roots, stems, leaves; functions of roots and leaves; various kinds of stem; use of stem; structure of roots, stems and leaves; arrangement of leaves; reproductive organs (flower and its parts); whorls; calyx, corolla, stamens, pistil, ovule, fruit; pruning, grafting, layering; hybridising; seed and embryo; sprouting; parasites and saprophites; general principles of classification (class, order, genus, species); botanical description of agricultural plants according to natural orders. (30 lectures.)

Fungoid pests; microbes helpful and inimical to Agriculture. (10 lectures.)

8. PRACTICAL CLASS IN BOTANY.

For both Classes together, with the Professor of Botany.

5 Field Classes. (10 hours.)

5 Laboratory demonstration in collection and preservation of botanical specimens and in microscopic mountings. (10 hours.)

9. GEOLOGY, METEOROLOGY AND PHYSIOGRAPHY.

For the Higher Class only, with Engineering students.

(30 lectures.)

10. HYDRAULICS.

For the Higher Class only, with Engineering students.

Irrigation; Drainage; Pumps; Windmills. (10 lectures.)

11. SURVEYING AND LEVELLING.

For the Lower Class only, with the Apprentice Department.

(40 lectures.)

Also 30 Field Classes for 60 hours.

12. *Book-keeping and Zamindari Accounts.*—[For both Classes together, with the Lecturer on Agriculture.] Native and European systems of weights and measures; books kept in Wards' estates and ordinary Zamindari estates; reading of vernacular manuscript; taking of stock; European system of book-keeping by double entry. (25 lectures.)

13. *Lectures on Law relating to Landlords and Tenants.*—For both Classes together, with the Lecturer on Agriculture. Lectures on Survey and Settlement Manuals, and on the Bengal Tenancy Act. (25 lectures.)

14. *Labour Journal and Cultivation Book.*—These should be kept by every student regularly.

Work for each Class.

			Higher class. (Hours.)	Lower class. (Hours.)
1.	Agriculture	...	180	180
2.	Farm Classes with Professor of Agriculture	...	80	80
3.	Ditto Overseer	...	160	160
4.	Workshop practice	...	Nil	320
5.	Organic chemistry	...	40	Nil
6.	Agricultural chemistry	...	50	Nil
7.	Laboratory practice	...	350	Nil
8.	Botany	...	40	40
9.	Practical botany	...	20	20
10.	Geology, meteorology, and physiography	...	30	Nil
11.	Hydraulics	...	10	Nil
12.	Surveying and levelling	...	Nil	100
13.	Book-keeping and Zamindari Accounts	...	25	25
14.	Law	...	25	25
	Total	...	1,010	950

i.e., About 4 hours a day for 40 working weeks.

WEATHER AND CROP REPORT.

For the week ending the 14th March 1898.

Burdwan.—No rain. Weather hot. Harvesting of *rabi* crops and of potatoes continues. Sugarcane being pressed. Scattered cases of cattle-pox reported. Common rice selling as follows:—

	Srs.	
Sadar	12 to 15	} per rupee.
Kalna	13	
Katwa	13½ to 14	
Raniganj	13 to 14	

Birbhum.—No rain. Weather seasonable. Pressing of sugarcane going on. Prices stationary. Fodder sufficient.

Bankura.—No rain. Weather seasonable. Harvesting of *rabi* and pressing of sugarcane continue. Fodder and water sufficient. Sporadic cases of cow-pox reported. Price of common rice 15 seers per rupee at Sadar and Vishnupur.

Midnapore.—No rain. Prospects of indigo and *boro* paddy good. Prices of common rice:—

	Srs.	
Sadar	12	} per rupee.
Contai	15 to 16	
Tamluk	13	
Ghatal	13½	

Hoochly.—No rain. Harvesting of *rabi* crops finished. Rain wanted to facilitate ploughing for *aus* sowing and for the benefit of mango crops. Common rice sells from 12 to 13½ seers per rupee.

Howrah.—No rain. Weather hot. Transplantation of *boro* paddy going on. Harvesting of *rabi* continues. Fodder and water sufficient. Common rice sells at 11 to 13 seers per rupee.

24-Parganas.—No rain. Days hot and nights cool. Lands being prepared for *aus* and jute. Prospects of standing crops fair. No cattle-disease. Fodder and water sufficient. Common rice sells as follows:—

	Srs.	
Sadar	10 to 13	} per rupee.
Barasat	12½	
Basirhat	13	
Diamond Harbour	13	

Nadia.—No rain. Weather getting hot. Preparation of land for *aus* going on. Wheat, barley, and gram being harvested. Threshing of linseed, *matar* and *masuri* continues. Common rice sells at 11½ to 15 seers per rupee. Fodder and water sufficient. Cattle-disease reported from thana Ranaghat.

Murshidabad.—No rain. Weather seasonable. Harvesting of *rabi* crops going on. Mulberry and indigo doing well. Fodder sufficient. No cattle-disease reported. Common rice sells as follows:—

	Srs.	
Sadar	13½	} per rupee.
Jangipur	14	
Kandi	14½	

Jessore.—No rain. Days hot, nights cool. Rain badly wanted for cultivation. Harvesting of *rabi* crops nearly completed. Insects damaged nearly three annas of the rape-seed and mustard-seed crops in the Narail subdivision. No cattle-disease reported. Fodder and water sufficient. Common rice sells as follows:—

	Srs.	
Jessore	12 to 14	} per rupee.
Narail	13-5½ ch.	
Bangaon	12 to 14	

Khulna.—No rain. Weather getting hot. Prospects of *boro* paddy good. Rain wanted. Water and fodder available. Common rice sells as follows:—

	Srs.	
Sadar	14 to 16	} per rupee.
Satkhira	14½	
Bagerhat	13	

Rajshahi.—No rain. Weather much warmer. Prospects of crops good. Ploughing for early sowings going on. No cattle-disease. Fodder and water plentiful. Price of common rice ranges from 11 to 15 seers per rupee.

Dinajpur.—Rainfall nil. Weather seasonable. Gathering of mustard nearly finished. Pressing of sugarcane going on. Land being prepared for *bhadoi* crops. No cattle-disease. Fodder and water plentiful. Rice sells at 14½ seers per rupee.

Jalpaiguri.—Rainfall nil. Weather seasonable. Lands being cultivated for *betri*, *bhadoi* and jute. Prospects of *rabi* crops favourable. No want of fodder and water. Common rice sells from 12 to 16 seers per rupee.

Darjeeling.—Rainfall nil. Weather cloudy. Hills—Potatoes and *bhutta* being sown; wheat and barley progressing well. Terai—Ploughing for *bhadoi* and jute going on; tobacco progressing. Coarse rice sells as follows:—

Hills	...	...	...	...	8 to 11 seers per rupee.
Terai	...	...	...	...	13 to 16 " "

Bhutta sells from 20 to 30 seers per rupee.

Rangpur.—No rain. Ploughing for jute and sowing of *aus* going on. Harvesting of *rabi* crops commenced. Common rice selling at 12 to 15 seers per rupee. Fodder and water sufficient except at Kurigram, where they are reported scarce in places. Good drinking-water also reported scarce in places at Gaibanda.

Bogra.—Rainfall nil. Gathering of oilseeds about to be finished. Lands being prepared for jute and *aus*. Fodder and water ample. Common rice selling from 12 to 18½ seers per rupee.

Pabna.—No rain. Weather seasonable. Crop prospects good. Common rice sells at 10 to 12 seers per rupee. Fodder sufficient.

Dacca.—Rainfall nil. Weather seasonable. Prospects of standing crops good. Fodder available. No cattle-disease. Price of common rice 11 to 13 seers per rupee.

Mymensingh.—Rainfall nil. Weather seasonable. Lands being ploughed for *aus* and jute. Prospects of standing crops generally good. Common rice sells at 10 to 12 seers per rupee. Cattle-disease reported from Kishorganj.

Faridpur.—No rain. Weather seasonable. Prospects of crops good. Price of rice 12 to 13 seers per rupee.

Backergunge.—Rainfall nil. Weather warm. Prospects of crops good. Common rice sells from 9 to 14½ seers per rupee.

Tippera.—No rain. Mornings and nights cool; days hot. Ploughing for paddy and jute continues. Standing crops doing well. Fodder sufficient. Water available. Price of rice 11 to 13 seers per rupee.

Noakhali.—Rainfall nil. Prospects of standing crops fair. Cultivation of *aus* crop continues. Fodder and water available. Price of common rice 11 to 14 seers per rupee.

Chittagong.—No rain. Days warm; nights and mornings cool. Spring crops badly suffering from drought. Fodder bad and drinking-water scarce in the wave-swept area. Rice selling at 12½ seers per rupee on an average.

Patna.—No rain. Harvesting of early *rabi* crops and lancing of poppy in progress. Prices almost stationary. In Patna common rice (new) selling at 16½ seers per rupee. Fodder and water for cattle sufficient.

Gaya.—No rain. Harvesting of *rabi* in progress. Prospects favourable. Common rice sells at 14 seers, barley 20 seers, wheat 13 seers, *arhar* 17½ seers, gram 16 seers, and *makai* 17½ seers per rupee. Fodder and water sufficient.

Shahabad.—No rain. Weather getting hot. Harvesting of *rabi* in progress. Sowing of *chena* and sugarcane progressing. Poppy collection continues. Fodder and water sufficient. Prices stationary.

Saran.—No rain. Weather seasonable. *Rabi* crops being harvested with good outturn. Opium collections almost over. Fodder and water sufficient. Average prices—common rice 13.4 seers and *makai* 20.2 seers per rupee, against 9.6 seers and 10.6 seers respectively last year.

Champaran.—No rain. Prospects of *rabi* crops very good. Opium collection going on; yield satisfactory. Prices almost stationary. Common rice and maize sell at 14 and 21 seers per rupee respectively, against average of 15½ and 20½ seers.

Muzaffarpur.—No rain. Prospects of crops continue to be good. Prices are—common rice 11 to 14 seers, wheat 11 seers, barley 16 seers, *makai* 20 seers, gram 11 seers, *rahar* 10 seers, and *marua* 19 seers per rupee.

Darbhanga.—No rain. Weather becoming gradually hot. Prospects of crops good. Harvesting of *rabi* and sowing of indigo going on. Fodder and water available. Price of common rice stationary.

Monghyr.—No rain. Weather getting warm. Prospects of *rabi* crops good. Harvesting of mustard, linseed, and *masuri* commenced. Mango prospects good. Poppy damaged slightly. No cattle-disease. Common rice sells as follows:—

Monghyr	...	...	...	12 to 16 seers per rupee.
Begusarai	...	...	...	13½ " "
Jamui	...	...	...	14 " "

Bhagalpur.—No rain. Weather getting warmer. Harvesting of early *rabi* crops in progress. Standing crops promise well. No cattle-disease reported. Fodder and water sufficient. Coarse rice sells as follows:—

Sadar	..	...	...	14½ seers per rupee.
Banka	...	...	...	15 " "
Madhipura	...	...	...	18 " "
Supaul	...	...	...	16 " "

Purnea.—No rain. Weather seasonable. Standing *rabi* crops doing well. Mustard and tobacco being harvested. Lands being prepared for jute, *bhadoi* and indigo crops. No cattle-disease. Fodder and water sufficient. Common rice sells as follows:—

Sadar	...	...	...	15 seers per rupee.
Kishanganj	...	...	...	16 " "
Araria	...	...	...	17 " "

Malda.—Rainfall nil. Weather getting hot. Prospects of *rabi* crops continue to be very good. Lands are being prepared for *bhadoi* crops. Ordinary rice selling at 13½ seers per rupee at Sadar and Balia Nawabganj.

Sonthal Parganas.—No rain. Weather dry and growing warm. Prospects of *rabi* crops favourable. Price of common rice 13 to 16 seers, and of maize 16 to 20 seers per rupee. Fodder and water sufficient.

Cuttack.—Rainfall nil. Weather seasonable. Threshing of paddy and pressing of sugarcane progressing. *Dalua* growing well. Condition of cattle generally good. Fodder sufficient. Common rice sells as follows:—

				Srs. ch.
Cuttack	...	...	...	15 12)
Jajpur	...	...	...	18 6)
Kendrapara	...	...	...	18 6) per rupee.
Banki	...	...	...	17 15)

Balasore.—Rainfall nil. Harvesting of *sarad* and *rabi* crops continues. *Dalua* and cotton crops growing well. Sugarcane being pressed. Ploughing continues. Cattle-disease reported from parts. Price of rice varies from 16 to 19 seers per rupee in the interior. Rice sells at 16 and 18 seers per rupee at Balasore and Bhadrak respectively. Fodder and water sufficient.

Angul.—No rain. Weather becoming hot. Price of rice stationary at both subdivisions. Cattle-disease continues.

Puri.—No rain. Rain wanted for summer rice and *moong*. Mustard, *khulthi*, and *arhar* have been harvested. Lands being ploughed for next *sarad* crop in places. Prospects of cotton, gram and other *rabi* crops generally good. Price of common rice almost stationary.

Hazaribagh.—No rain. Windy; getting warm. *Rabi* promises well. Mango in blossom. Poppy retarded by strong winds. Rice sells at 12 to 14 seers per rupee.

Lohardaga.—No rain. Reaping of wheat and *rahar* commenced. Rice sells at Ranchi 11 seers per rupee, and in the interior from 12 to 16 seers per rupee. Cattle-disease continues. Fodder and water sufficient. Grain in stock sufficient.

Palamau.—Rainfall nil. Weather getting warm. *Rabi* ripening. Rice sells at 12 seers per rupee. Fodder and water sufficient.

Manbhum.—Rainfall nil. Weather seasonable. Prospects of crops on the ground are good. No cattle-disease reported. Fodder and drinking-water sufficient. Average price of common rice at Sadar 16 seers, and at Gobindpur 15 seers per rupee. Supply sufficient.

Singhbhum.—Report not received.

General Summary.—No rain fell during the week. Except in Chittagong, where rain is badly needed, the general prospects of the crops in all other districts are reported favourable. The harvesting of the *rabi* crops and of sugarcane is going on. Some damage has been done by insect pests to the oilseed crops in the Narail subdivision of Jessore. The collection of opium is proceeding, but in Hazaribagh it is retarded by strong winds. Ploughing for early rice and jute is going on, but rain is required. Prices continue steady. Cattle are generally in good condition, excepting in Lohardaga and Angul and in parts of Nadia, Mymensingh and Balasore. Sporadic cases of cow-pox are reported from Burdwan and Bankura. The fodder-supply is everywhere good except in parts of Rangpur and Chittagong.

By order of the Lieutenant-Governor of Bengal,

REVENUE DEPARTMENT,

M. FINUCANE,

The 15th March 1898.

Secretary to the Govt. of Bengal.

1

IMPORTS INTO CALCUTTA.

The following Statement shows the Quantities of the Principal Staples of Traffic imported into Calcutta from the Interior by Rail, Road, River (Country-boat and Steamer), and Canal during the month of September 1897.

Whence imported.	RICE AND PADDY.					FOOD-GRAINS.					FIBROUS PRODUCTS.				OILSEEDS.		Tea, Indian.	Cotton, raw.	Silk, raw.	Coal and coke.	SUGAR.		Tobacco.
	Rice.		Paddy.		Wheat.	Gram and pulses.	Other food-grains.	Total.	Jute, raw.	Gunny-bags.	Oilseeds.		Mustard seed.	Refined.	Unrefined.								
	Mds.	Mds.	Mds.	Mds.							Mds.	Mds.				Mds.					Mds.	Mds.	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21			
BURMA.																							
Burman	31,708	26,314	37,544			83	29,676	346	67,797	1,575	115			133	26,173		179	153	277				
Birmah	3,567	3,567	3,567		22		3,568		4,990					170				169	169				
Birmah	1,37,704	29,178	1,44,188		22		1,63,910	157	16,021	3,281				525	7,495		109	1,716	157				
Birmah	1,26,321	1,47,353	1,47,353	64	6,154		1,53,976	82,071	1,00,000	1,000				6	1,895		458	14,798	9,879				
Birmah	1,26,321	1,47,353	1,47,353	34	1,000		1,53,976	1,79,028	3,01,500	13				2,023	5,890		4,014	9,889	3,380				
Birmah	13,403	1,048	14,451	8,415	26,759	207	37,330	1,85,983	25,640	18				519	5,890		3,223	673	3,189				
Birmah	13,403	1,048	14,451	8,415	26,759	207	37,330	1,85,983	25,640	18				519	5,890		3,223	673	3,189				
Birmah	13,403	1,048	14,451	8,415	26,759	207	37,330	1,85,983	25,640	18				519	5,890		3,223	673	3,189				
Birmah	13,403	1,048	14,451	8,415	26,759	207	37,330	1,85,983	25,640	18				519	5,890		3,223	673	3,189				
Birmah	13,403	1,048	14,451	8,415	26,759	207	37,330	1,85,983	25,640	18				519	5,890		3,223	673	3,189				
Birmah	13,403	1,048	14,451	8,415	26,759	207	37,330	1,85,983	25,640	18				519	5,890		3,223	673	3,189				
Birmah	13,403	1,048	14,451	8,415	26,759	207	37,330	1,85,983	25,640	18				519	5,890		3,223	673	3,189				
Birmah	13,403	1,048	14,451	8,415	26,759	207	37,330	1,85,983	25,640	18				519	5,890		3,223	673	3,189				
Birmah	13,403	1,048	14,451	8,415	26,759	207	37,330	1,85,983	25,640	18				519	5,890		3,223	673	3,189				
Birmah	13,403	1,048	14,451	8,415	26,759	207	37,330	1,85,983	25,640	18				519	5,890		3,223	673	3,189				
Birmah	13,403	1,048	14,451	8,415	26,759	207	37,330	1,85,983	25,640	18				519	5,890		3,223	673	3,189				
Birmah	13,403	1,048	14,451	8,415	26,759	207	37,330	1,85,983	25,640	18				519	5,890		3,223	673	3,189				

* One maund of paddy is equivalent to 25 seers of rice.

† Exclusive of bars obtained by local manufacture

Where imported.	FOOD-GRAINS.										FIBROUS PRODUCTS.		OILSEEDS.		T'ra. Indian.	Cotton, r. w.	Silk, raw.	Coal and coke.	Indigo.	SUGAR.		TOBACCO.	
	RICE AND PADDY.		Wheat.	Gram and pulses.	Other food-grains.	Total.	Jute, raw.	Gunny-bags,†	Linseed.	Mustard seed.	Refined.	Unrefined.	Manufactured.	Manufactured.									
	Rice.	Paddy.																		Total (in rice).			
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21			
ORISSA.																							
Cuttack	Mds.	125	Mds.	Mds.	Mds.	Mds.	Mds.	Mds.	No.	Mds.	Mds.	Mds.	Mds.	Mds.	Mds.	Mds.	Mds.	Mds.	Mds.	Mds.			
Balasore	79,332	28,973	1,03,710	78	2,803	.....	1,03,616	.....	2,004	.....	.....	22	.....	.....	.....	.....	.....	.....	.....	.....
Total of Orissa	79,332	28,973	1,03,710	78	2,803	.....	1,03,616	.....	2,004	.....	.....	22	.....	.....	.....	.....	.....	.....	.....	.....
CHOTA NAGPUR.																							
Bazarbagh	3	.....	3	.....	3	.....	4	.....	1,015	.....	.....	37	14	.....	1,21,753	.....	.....	.....	.....	.....
Manbhum	.....	.....	.....	.....	.....	.....	.....	.....	1,190	.....	.....	962	.....	.....	13,70,509	.....	.....	.....	.....	.....
Singbhum	.....	.....	.....	.....	.....	.....	.....	.....	1,76	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total of Chota Nagpur.	3	.....	3	.....	3	.....	4	.....	2,205	.....	.....	999	.....	.....	14,92,193	.....	.....	.....	.....	.....
Grand Total of supplies from the Provinces under the Lieutenant-Governor of Bengal.	8,60,330	1,03,613	9,63,943	14,837	1,73,997	9,361	9,64,013	34,30,141	792,674	1,61,066	1,43,000	50,306	10,341	3,180	41,45,408	115	9,314	39,336	64,333	3,971			
OTHER PROVINCES.																							
Assam	763	.....	763	71	17,136	3,831	2,47,783	373	4,305	8,155	1,03,803	1,41,447	900	12	.....	2	.....	.....	.....	.....
North-western Provinces and Oudh.	37	.....	37	15,303	203	2,260	17,750	.....	1,190	66,739	14,343	137	16,825	.....	.....	.....	.....	.....	.....	.....
Punjab	249	.....	249	249	.....	.....	436	.....	105	.....	.....	716	1,061	.....	.....	.....	.....	.....	.....	.....
Central Provinces and Berar.	.....	.....	.....	.....	.....	.....	.....	.....	70	.....	.....	1	778	.....	.....	.....	.....	.....	.....	.....
Madras	7,091	.....	7,091	.....	.....	.....	.....	.....	280	.....	.....	.....	976	.....	.....	.....	.....	.....	.....	.....
Bombay	1,79,213	493	1,79,220	.....	19,430	330	26,871	.....	6,300	.....	.....	1	14,783	.....	.....	.....	.....	.....	.....	.....
Burma	79,485	1,391	80,355	.....	1,576	73	81,009	.....	16,800	.....	.....	.....	305	.....	6,313	1	70,433	63,064	.....	.....	
Other places	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Grand Total of imports in September	8,25,132	1,54,096	9,79,228	2,56,335	2,16,315	15,847	14,10,234	34,40,119	830,774	2,26,979	2,60,231	1,62,648	46,004	2,201	41,51,835	116	84,440	1,04,016	63,137	4,960			
of imports in September	9,96,816	4,28,700	11,64,501	1,65,341	4,03,092	15,679	17,50,413	33,92,793	1,300,181	3,13,484	1,97,884	2,61,787	68,467	2,006	34,29,754	273	81,886	62,830	48,178	3,641			

• One maund of paddy is equivalent to 25 seers of rice.

* One maund of paddy is equivalent to 25 seers of rice.

† Exclusive of bags obtained by local manufacture.

II.

The Sea-borne Trade of Calcutta in these Staples during the month of September 1897 was as follows:—

EXPORTED FROM CALCUTTA.	Rice.	Paddy.	Total (in rice).	Wheat.	Gram and pulses.	Other food- grains.	Total.	Jute, raw.	Gunny- bags.	Lin seed.	Mustard seed.	Tea, Indian.	Cotton, raw.	Silk, raw.	SUGAR.		Total
															Refined.	Unrefined.	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
To Indian ports, viz.—	Mds.	Mds.	Mds.	Mds.	Mds.	Mds.	Mds.	Mds.	No.	Mds.	Mds.	Mds.	Mds.	Mds.	Mds.	Mds.	Mds.
Bombay ...	52	30	542	.....	60	124	726	.....	1,857,050	.....	781	2,037	1,468	.....	112	.....	...
Other ports in Bombay ...	.....	.....	.....	.....	.....	.....	.....	.....	291,700	.....	.....	2	.....	.....	.....	.....	...
Madras ...	.....	.....	599	2,359	9,900	9,064	21,991	25	479,909	.....	1,334	23	.....	107	33	3	...
Other ports in Madras ...	.....	.....	.....	236	10	697	993	2,563	157,300	.....	947	3	.....	1	23	.....	...
Burma ...	2,033	.....	2,033	5,578	346	7,948	15,905	112	452,000	.....	.....	176	19	16	1,192	1,818	30,860
Other Indian ports ...	.....	.....	.....	1,330	783	1,360	3,477	.....	86,000	.....	.....	9	.....	15	2,064	293	1,280
Pondicherry ...	.....	.....	.....	.....	.....	.....	.....	.....	2,100	.....	.....	.....	.....	.....	.....	.....	.....
Total of Inter- portal trade ...	3,160	30	3,178	9,553	11,063	19,193	42,992	2,700	3,396,050	.....	3,063	2,250	1,477	139	4,072	1,614	32,300
To Foreign ports—																	
United Kingdom	25,732	.....	25,732	.....	.....	4,093	29,825	5,04,369	2,701,150	1,77,707	.....	2,19,293	436	509	.....	.....	...
Other Foreign ports ...	70,248	.....	70,248	746	15,312	9,383	95,689	1,07,593	8,615,100	1,83,580	19,110	10,398	9,170	244	346	39	23
Total of Foreign trade ...	95,980	.....	95,980	746	15,312	13,476	1,25,514	6,11,962	11,316,250	3,67,287	19,110	2,29,691	9,606	1,353	346	39	23
Grand Total (1897 of Exports in September 1898)	99,140	30	99,158	10,299	26,380	32,669	1,68,506	6,14,662	14,642,300	3,67,287	23,172	2,31,941	11,063	1,409	4,418	1,853	32,323
	3,96,681	1,000	3,27,808	1,602	1,56,491	12,771	4,98,080	13,62,307	14,125,860	4,84,421	16,786	2,04,576	10,073	2,233	5,207	1,313	29,658

III.

IMPORTS INTO CALCUTTA.

The following statement shows the several routes followed by the Trade in the Principal Staples of Traffic imported into Calcutta during the month of September 1897.

SPECIFICATION OF ROUTES.	FOOD-GRAINS.					FIBROUS PRODUCTS.		OILSEEDS.		Tea, Indian.	Cotton, raw.	Silk, raw.	Coal and Coke	Indigo.	SUGAR.		Total (Minimum-Increased).
	Rice.	Paddy.	Wheat.	Gram and pulses.	Other food-grains.	Jute, raw.	Gunny-bags.	Linseed.	Mustard seed.						Re-fined.	Un-refined.	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
	Mds.	Mds.	Mds.	Mds.	Mds.	Mds.	No.	Mds.	Mds.	Mds.	Mds.	Mds.	Mds.	Mds.	Mds.	Mds.	Mds.
By country boats ...	3,82,449	66,180	6,243	27,537	684	4,41,976	490,997	40,423	71,444	.....	7,063	373	11,070	...	5,824	31,534	16,400
“ river steamers ...	39,633	9,898	2,014	6,479	.....	4,78,160	11,072	9,081	93,316	1,41,447	1,100	1,284	20,012	...	2,638	134	1,007
“ rail { E. I. Railway	12,550	27,046	2,47,844	1,12,376	14,741	69,683	84,210	1,61,800	68,053	1,855	20,189	263	41,10,765	102	23	2,001	3,720
	E. R. S. Rail-way.	6,710	107	...	11,569	.....	22,76,864	303,876	10,094	12,867	47,378	791	270	15	...	5,023	30,455
“ road ...	49,414	13,712	34	.....	... ..	1,51,340	6,400	12	.....	.....	181	...	3,640	...	564	807	4,225
“ sea ...	3,43,475	87,153	...	26,334	463	.....	24,220	.....	1	1,928	16,798	6	6,343	1	75,204	65,064	200
Grand Total of Imports in { 1897	3,25,152	1,84,696	2,56,235	2,10,316	15,847	24,40,119	820,774	2,29,979	2,00,281	1,92,008	40,004	2,201	41,51,835	118	84,440	1,04,015	65,123
“ “																	

IV.

EXPORTS FROM CALCUTTA.

The following Statement shows the Values and Quantities of the Principal Staples of Traffic exported Inland from Calcutta by Rail, Road, River (Country-boat and Steamer), and Canal during the month of September 1897 :—

Value exported.	Cotton piece-goods.		Cotton twist.		Salt.	Kerosine oil.	Gunny-bags.	Whither exported.	Cotton piece-goods.		Cotton twist.		Salt.	Kerosine oil.	Gunny-bags.
	European.	Indian.	European.	Indian.					European.	Indian.	European.	Indian.			
1	2	3	4	5	6	7	8								
ORISSA.															
Balasore	Rs. 81,200	Rs.	Mds. 750	Mds. 5,678	Mds. 16,034	Mds. 7,003	No. 84,000								
CHOTA NAGPUR.															
Hazaribagh	75,456	270	1	253	10,759	2,034	2,093								
Manbhum	1,33,370	47	24	547	25,974	4,190	3,010								
Singbhum	13,862	232	4	27	6,823	312	840								
Total of Chota Nagpur ...	2,22,968	569	29	827	41,654	5,536	4,545								
Grand Total of supplies into the Provinces under the Lieutenant-Governor of Bengal.	1,01,14,360	59,710	11,967	16,800	6,77,719	2,54,464	6,22,327								
OTHER PROVINCES.															
Assam	10,29,346	.....	3,306	487	48,089	16,673	12,670								
North-Western Provinces and Oudh	15,78,003	17,150	2,963	287	23,001	42,630	301,420								
Punjab	6,69,810	1,160	413	33	5,002	201,145	201,145								
Central Provinces	70,678	390	211	346	7,781	54,040	54,040								
Rajputana and Central India	51,194	47	121	3	287	32,535	32,535								
Berar	5,463	.....	.....	.....	.....	5,390	5,390								
Nizam's Territory	841	.....	.....	.....	.....	.....	.....		
Bombay	12,130	22,320	.....	.....	.....	2,150,385	2,150,385								
Madras	17,040	.....	92	10	597	6,38,915	6,38,915								
Mysore	46	.....	.....	.....	.....	.....	.....		
Pondicherry ... ..	.....	.....	.....	.....	.....	2,107	2,107								
Burma	1,78,400	2,305	1,912	1,173	900	542,002	542,002								
Other places	12,574	4,317	583	29,780	4	11,310,250	11,310,250								
Grand Total of Ex-ports in September 1897 ...	1,37,33,201	1,07,946	20,587	48,688	7,48,773	3,28,337	15,790,417								
ports in September 1896 ...	1,39,48,760	81,775	23,783	40,598	7,74,378	3,30,108	16,384,336								

V.

The Sea-borne Trade of Calcutta in these Staples during the month of September 1897 was as follows :—

IMPORTED INTO CALCUTTA.	COTTON PIECE-GOODS.		COTTON TWIST.		Salt.	Kerosine oil.	Gunny-bags.
	European.	Indian.	European.	Indian.			
1	2	3	4	5	6	7	8
Foreign Ports—United Kingdom	Rs. 1,16,52,089	Rs.	Mds. 14,716	Mds.	Mds. 5,53,333	Mds. 3,80,223	No. 18,800
Other Foreign ports	67,975	.....	459	.....	4,90,427	.....	.....
Total of Foreign Trade	1,16,59,704	.....	15,175	.....	10,52,769	3,80,223	18,800
Indian Ports—Calcutta	2,945	3,20,175	.....	12,292	39,717	.....	250
Other Indian ports	600	46,407	.....	.....	.....	22,300	6,380
Total of Indian Trade	6,763	3,66,582	.....	.....	.....	.....	1,830
Interport Trade	10,308	3,68,792	.....	12,292	39,717	22,300	2,430
Total of Im-ports in August 1897	1,16,10,012	3,66,792	15,175	12,292	10,92,476	4,11,632	24,230
in August 1896	69,34,928	7,85,320	18,477	13,835	5,83,166	2,50,160	6,325

* As per tariff declaration value.

VI.

The following Statement shows the several Routes followed by the Trade in the Principal Staples of Traffic exported from Calcutta during the month of September 1897 :—

LOCATION OF ROUTES—	Rs.		Mds.		Mds.		Mds.		No.
	1897	1896	1897	1896	1897	1896	1897	1896	
Country boats	2,02,936	6,300	808	.....	1,04,160	44,045	80,337	80,337	80,337
Steamers	19,67,357	9,100	4,543	427	1,12,559	45,380	53,805	53,805	53,805
East Indian Railway	62,27,194	56,511	5,187	7,576	8,65,730	1,22,749	262,600	262,600	262,600
Eastern Bengal State Railway	46,17,583	1,023	6,078	4,104	71,532	20,644	86,383	86,383	86,383
Grand Total of Exports in September 1897	1,37,33,201	1,07,946	20,587	48,688	7,48,773	3,28,337	15,790,417	15,790,417	15,790,417
in September 1896	1,39,48,760	81,775	23,783	40,598	7,74,378	3,30,108	16,384,336	16,384,336	16,384,336

STATISTICAL DEPARTMENT,
The 11th March 1898.

M. FINUCANE,
Secy. to the Govt. of Bengal.

COMPARATIVE STATEMENT OF THE PRICES OF FOOD-GRAINS.

RETAIL prices of common rice and other food-grains in the several districts of Bengal and in the neighbouring districts of the North-Western Provinces during the first and second fortnights of January and February 1898, as compared with the corresponding fortnights of January and February 1897, are published for general information. The latest available prices of common rice in Cachar and Sylhet are also published.

M. FINUCANE,

Secy. to the Govt. of Bengal.

REVENUE DEPARTMENT, the 14th March 1898.

Quantity obtainable for a rupee.

Districts.	1898.				1897.			
	15th January.	31st January.	15th February.	28th February.	15th January.	31st January.	15th February.	28th February.
1	2	3	4	5	6	7	8	9
Common Rice—	S. CH.	S. CH.	S. CH.	S. CH.	S. CH.	S. CH.	S. CH.	S. CH.
Burdwan ...	12 12	13 2	13 14	13 14	10 0	9 12	11 0	11 0
Birbhum ...	12 12	13 8	13 8	13 8	9 6	9 0	{ 9 0 to 9 12 }	{ 9 12 }
Bankura ...	15 0	15 10	15 0	15 0	11 8	11 4	11 4	11 8
Midnapore ...	{ 13 0 to 13 12 }	{ 13 0 }	13 0	13 12	10 8	{ 10 8 to 11 0 }	11 0	11 0
Hooghly ...	9 8	10 0	11 0	11 0	8 8	8 8	9 0	9 8
Howrah ...	{ 11 8 (new.) 9 8 (old.) }	{ 11 8 }	11 6	13 0	10 8	10 8	9 8	10 8
24-Barganas ...	12 0	11 14	11 14	11 14	10 0	10 8	11 0	10 0
Calcutta ...	8 0	8 0	8 0	8 0	8 0	8 0	8 0	8 0
Nadia ...	11 14½	11 13	12 0	12 7	9 2	9 2	9 2	9 9
Murshidabad ...	13 8	13 0	13 12	14 8	10 0	10 0	10 8	10 2
Jessore ...	13 8	13 0	13 0	13 0	9 6	10 0	11 0	11 0
Khulna ...	14 4	14 4	14 4	14 4	10 8	11 8	11 6	12 12
Rajahmahi ...	13 2	12 12	12 12	13 8	9 6	9 12	9 12	10 2
Dinajpur ...	14 5	13 8	13 8	14 5	9 9-3/4	10 0	9 9-3/4	10 3-1/4
Jalpaiguri ...	12 4	12 8	12 8	12 8	9 0	9 0	9 0	9 0
Darjeeling ...	11 8	11 0	11 0	11 0	8 0	8 0	8 0	8 8
Rangpur ...	12 0	11 0	12 0	12 0	10 0	10 8	10 8	10 0
Bogra ...	11 10	12 0	12 0	12 12	10 2	10 8	10 2	10 14
Pabna ...	11 4	11 4	11 10	12 0	9 7½	9 6	10 0	10 8
Dacca ...	11 0	11 12	12 0	11 12	10 6	10 8	10 8	10 0
Mymensingh ...	10 0	10 0	10 0	10 0	9 0	9 0	9 0	9 0
Faridpur ...	11 4	12 0	11 8	12 0	9 8	9 12	9 12	10 0
Backergunge ...	{ 7 12 (old.) 12 0 (new.) }	{ 7 12 (old.) 12 0 (new.) }	12 0	12 0	{ 7 8 (old.) 10 0 (new.) }	10 8	10 8	10 4
Tippura ...	11 10	11 6	12 4	11 14	11 0	10 10	10 10	11 2
Noakhali ...	12 0	12 8	12 8	11 0	10 8	10 8	10 0	10 8
Chittagong ...	13 0	13 0	12 4	12 4	9 0	9 0	9 4	9 8
Patna ...	15 8	15 0	15 0	14 8	10 2	10 6	10 8	10 0
Gaya ...	14 8	14 8	14 4	14 0	9 0	9 0	9 8	9 4
Shahabad ...	{ 14 0 & 14 8 }	{ 13 0 & 13 8 }	{ 13 0 & 13 8 }	{ 13 0 & 13 8 }	{ 9 8 & 10 0 }	{ 9 0 & 10 0 }	{ 9 8 & 11 0 }	{ 9 8 & 9 12 }
Saran ...	14 8	14 8	14 8	14 4	9 8	9 8	10 0	10 0
Champaran ...	15 0	15 0	15 0	14 8	8 8	9 0	9 3½	9 4
Musaffarpur ...	14 0	14 8	14 0	14 8	8 0	9 0	9 0	8 8
Darbhanga ...	14 8	14 0	13 8	13 8	9 0	9 4	9 0	9 0
Monghyr ...	12 12½	12 8½	12 9½	12 9½	9 2	9 8	9 8	9 0
Bhagalpur ...	15 2	15 8	15 2	14 8	10 2	10 2	10 12	10 2
Purnea ...	16 0	16 8	16 8	16 0	10 0	10 0	9 8	10 0
Malda ...	14 8	14 0	13 0	13 0	9 0	10 0	10 8	9 8
Sonthal Par-gamas.	14 0	13 12	14 0	13 0	10 4	10 0	10 12	10 4
Cuttack ...	15 12	15 12	15 12	15 12	11 12	11 12	11 12	11 12
Balasore ...	14 8	14 8	15 0	16 0	11 0	12 0	12 0	12 0
Puri ...	15 12	17 1	15 12	17 2	10 8	10 8	13 2	11 12
Hazaribagh ...	13 0	13 0	13 0	13 0	8 0	8 0	9 0	9 0
Lohardaga ...	{ 12 0 to 13 0 }	{ 12 8 to 13 4 }	{ 12 0 to 13 0 }	13 0	9 0	9 0	{ 8 8 to 9 0 }	{ 8 8 to 9 4 }
Palamanu ...	14 15	11 13	12 6	12 6	9 4	8 11	8 7	8 7
Manbhum ...	16 8	16 0	16 0	16 0	11 0	10 8	{ 10 0 to 10 8 }	{ 10 8 }
Singbhum ...	16 0	16 0	16 0	16 0	12 0	11 0	11 0	11 0

Districts.	1898.				1897.			
	15th January.	31st January.	15th February.	28th February.	15th January.	31st January.	15th February.	28th February.
1	2	3	4	5	6	7	8	9
	S. CH.	S. CH.	S. CH.	S. CH.	S. CH.	S. CH.	S. CH.	S. CH.
Patna	12 0	12 8	13 0	12 0	9 8	9 0	8 0 and 9 0	10 0
Gaya	9 4 10 0	9 8 10 4	10 8 10 0	10 0 10 0	8 0 8 8	8 0 8 0	7 8 8 0	8 0 8 8
Shahabad	10 8 11 8	10 8 11 12	10 8 11 0	11 0 11 8	9 0 8 8	8 12 8 8	9 0 8 8	9 0 8 8
Baran	9 8	9 12	10 0	11 0	9 0	9 0	8 14	7 12
Champaran	10 8	11 0	11 0	10 0	8 0	8 0	8 0	8 0
Muzaffarpur	10 0	10 0	10 0	9 8	7 4	7 0	7 0	8 0
Darbhanga	11 5½	10 0½	10 12½	11 2½	8 12	8 0	8 4	8 8
Monghyr	11 7	11 6	11 6	10 12	8 14	8 14	8 14	8 14
Bhagalpur	10 0	8 0	.....	8 8	10 0	10 4	11 0	9 8
Purnea								
AN-CORN OR MAISE--								
Patna	20 8	21 8	21 0	20 8	11 8	11 12	12 8	11 8
Gaya	20 0	19 0	18 0	17 8	10 8	10 8	10 8	10 8
Shahabad	17 8	17 8	18 0	18 8	10 8	11 8	11 0 and 11 8	11 4
Baran	18 6	19 12	19 12	19 4	10 8	10 8	10 4	10 8
Champaran	20 0	21 0	22 0	21 8	10 0	10 8	10 11½	10 6
Muzaffarpur	20 0	20 0	20 0	20 0	10 8	10 0	10 0	10 8
Darbhanga	18 8	19 0	19 0	19 0	9 12	10 0	10 0	9 4
Monghyr	20 7½	21 0	19 2½	21 0	11 4	10 12	11 8	12 0
Bhagalpur	21 4	21 8	21 8	21 8	11 6	12 0	12 0	11 6
Purnea	20 0	20 0	20 0	20 0	16 0	18 0	.....	.....
Konthal Parganas	19 0	19 0	19 0	20 0	12 0	12 4	12 0	12 0
Basaribagh	16 0	16 0	16 0	16 0	10 0	10 0	10 0	10 0
Chardaga	16 0	16 0	16 0	17 0	10 0	9 0	9 0	9 0
Palaman	18 0	18 14	18 14	16 14	10 14	10 6	9 9	9 9
Manbhum	18 0	18 0	18 0	18 0	12 0	12 0	13 0	12 0

NORTH-WESTERN PROVINCES.

on Rice--								
Jaunpur	9 8	10 8	10 8	10 8	9 8	9 8	9 12	9 12
Boharpur	14 6	14 6	13 16	12 9	8 2	8 2	8 12	8 9
Mirzapur	10 15	10 13	10 12	10 12	7 11	7 13	7 12	8 6
Benares	11 2	10 9	10 13½	10 13½	7 9	8 1½	8 6	8 6
Bhazipur	10 4	11 8	11 4	11 4	8 4	8 8	9 4	9 4
Ballia	10 0	10 0	10 0	11 4	8 8	9 0	10 0	9 8
on Rice--								
Jaunpur	10 0	10 8	11 0	12 8	7 11	7 6	7 12	7 12
Boharpur	12 2	12 2	12 9	12 9	7 8	7 6	8 9	8 2
Mirzapur	9 4	9 10	9 9	10 2	7 14	8 2	8 9	8 1
Benares	10 5	11 2	10 13½	11 15	7 11	8 11½	7 12	7 11
Bhazipur	9 8	9 8	10 4	10 12	7 0	8 8	8 8	9 8
Ballia	10 0	10 4	10 4	10 0	7 8	7 12	9 0	8 12

Assam.

Prices of common rice for the week ending 24th February 1898:—

	Week of report.	Preceding week.	Corresponding week of 1897.
	S. CH.	S. CH.	S. CH.
CACHAR--			
Janiganj Bazar	9 6	9 6	9 11
Hailakandi	9 0	9 0	9 0
SYLHET--			
Kasi Bazar	11 4	12 12	10 8
Ohhatak Bazar	11 0	11 8	10 0
Sunamganj	10 0	10 0	9 0
Habiganj	13 0	12 8	10 0
Karimganj	10 0	10 8	9 0
Maulvi Bazar	12 *	12 8	10 0

Meteorological Report of the Province

METEOROLOGICAL DIVISION.	DIVISION.	DISTRICT.	Representative stations.	STATION OBSERVATIONS.											
				AIR PRESSURE.					WIND.		TEMPERATURE.				
				Highest, 8 A.M. barometer reading.	Lowest, 8 A.M. barometer reading.	Mean, 8 A.M. reduced to 32°.	Mean reduced to sea-level and constant gravity, Lat. 45°.	Variation from normal mean.	Mean direction at 8 A.M.	Mean velocity in miles daily.	Highest of month.	Lowest of month.	Mean daily maximum temperature.	Mean daily minimum temperature.	Mean daily temperature.
			
SOUTH-WEST BENGAL.	Burdwan	Burdwan	Burdwan	29.983	29.648	29.858	29.909	-.070	N56°W	31	92.4	80.0	83.7	80.9	71.9
		Raniganj	Raniganj	29.765	29.300	29.615	29.916	-	N59°W	65	90.5	47.7	83.4	80.9	69.7
		Birbhum	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
		Bankura	Bankura	29.753	29.334	29.632	29.995	-	N63°W	54	90.1	50.9	83.8	80.1	71.2
		Midnapore	Midnapore	29.984	29.508	29.604	29.907	-.082	N8°W	30	94.3	81.2	85.9	80.4	73.2
	Presidency	Howrah	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
		24 Parganas	Saugor Island	30.053	29.023	29.920	29.890	-.080	N39°W	258	88.9	83.6	81.4	84.8	78.1
		Calcutta	Calcutta	30.008	29.094	29.938	29.908	-.073	S56°W	65	88.9	80.2	81.2	80.3	79.7
		Nadia	Krishnagar	30.040	29.501	29.917	29.914	-	W	95	89.0	44.6	81.3	80.0	66.7
		Murshidabad	Berhampore	30.024	29.340	29.884	29.963	-.076	N88°W	85	88.5	47.6	80.2	86.3	68.3
NORTH BENGAL.	Rajshahi	Jessore	Jessore	30.041	29.086	29.915	29.896	-.078	N18°W	65	88.5	46.1	81.1	87.7	69.4
		Khulna	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
		Rajshahi	Rampur Hoalia	30.004	29.834	29.874	29.899	-.074	N63°W	80	88.9	48.0	78.6	86.0	67.3
		Dinajpur	Dinajpur	29.602	29.442	29.823	29.908	-.088	N48°W	104	88.8	47.0	77.8	84.3	68.1
		Jalpaiguri	Jalpaiguri	29.810	29.257	29.632	29.909	-.064	N63°E	52	80.4	50.6	75.7	84.4	66.1
	Dacca	Darjeeling	Darjeeling	33.156	32.025	32.941	-	-.018	S46°E	113	?	27.6	?	(b) 31.3	?
		Cooch Behar	Cooch Behar	29.026	29.617	29.775	29.885	-	S80°E	70	80.3	40.3	75.3	85.0	65.1
		Rangpur	Rangpur	29.961	29.431	29.819	29.903	-.072	N8°W	87	81.3	48.5	76.5	84.5	66.4
		Hogra	Hogra	30.006	29.618	29.879	29.896	-	?	?	80.2	47.2	77.4	85.5	66.3
		Fabna	Sirajganj	30.011	29.533	29.883	29.884	-.084	N81°W	40	85.3	45.6	77.6	85.4	66.5
EAST BENGAL.	Chittagong	Dacca	Narayanjanj	30.045	29.560	29.917	29.892	-.065	N39°W	90	88.6	80.7	80.0	80.4	69.6
		Mymensingh	Mymensingh	30.004	29.523	29.881	29.894	-.080	S63°W	?	84.3	48.6	77.8	86.1	67.0
		Faridpur	Faridpur	30.029	29.575	29.903	29.899	-.080	N	26	89.6	47.0	79.4	86.3	67.9
		Backergunge	Barisal	30.080	29.003	29.928	29.897	-.064	N6°W	42	87.8	50.3	81.4	88.7	70.1
		Tippere	Comilla	30.028	29.564	29.913	29.898	-	N37°W	59	80.4	47.9	81.9	87.4	69.7
	Patna	Noakhali	Noakhali	30.025	29.585	29.910	29.901	-	N23°W	76	85.9	48.0	81.2	85.6	68.3
		Chittagong	Chittagong	29.980	29.532	29.859	29.896	-.080	N30°E	117	88.7	45.1	88.1	88.4	70.8
		South Lushai Hills	Lungleh	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
		Patna	Bankipore	29.997	29.468	29.760	29.906	-.091	S68°W	84	83.7	47.9	75.8	83.4	68.9
		Gaya	Gaya	29.607	29.295	29.571	29.920	-.076	S45°W	127	80.0	40.5	80.3	86.3	66.2
BIBAL.	Bhagalpur	Shahabad	Dehri	29.715	29.351	29.592	29.917	-.075	S88°W	161	86.3	50.6	78.8	88.1	68.5
		Buxar	Buxar	29.827	29.435	29.703	29.911	-.083	S63°W	118	84.6	47.8	77.3	(A) 84.7	69.7
		Arrah	Arrah	29.683	29.454	29.741	29.894	-	S70°W	90	83.9	44.8	77.2	83.0	68.1
		Baran	Chapra	29.908	29.464	29.761	29.908	-	S41°W	83	84.1	46.6	77.0	83.5	68.2
		Champaran	Motihari	29.860	29.390	29.710	29.905	-	S78°W	152	81.0	43.9	74.6	82.1	68.4
	Bhagalpur	Munafarpur	Munafarpur	29.904	29.429	29.761	29.903	-	N27°E	133	83.7	45.5	75.7	73.3	64.4
		Darbhanga	Darbhanga	29.907	29.417	29.768	29.897	-.080	S63°W	113	81.8	49.1	75.4	85.4	66.5
		Monghyr	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
		Bhagalpur	Bhagalpur	29.911	29.440	29.784	29.903	-.081	S23°W	72	85.3	48.3	77.1	85.0	66.1
		Purnea	Purnea	29.978	29.481	29.825	29.911	-.082	S82°W	122	83.0	43.6	76.9	85.4	66.2
ORISSA.	Orissa	Malda	Malda	29.989	29.514	29.683	29.896	-	N87°W	53	84.9	44.2	77.5	83.4	66.5
		Sonthal Parganas	Naya Dumka	29.883	29.121	29.447	29.917	-.064	N24°W	36	88.0	47.3	79.2	86.0	67.6
		Outtack	Outtack	30.007	29.009	29.898	29.908	-.064	N50°W	50	96.4	84.1	88.3	82.4	78.4
		False Point	False Point	30.060	29.057	29.940	29.903	-.064	N74°W	159	80.9	50.5	82.2	81.8	71.9
		Balasore	Balasore	30.080	29.617	29.914	29.900	-.055	S85°W	67	98.4	80.5	85.7	80.0	78.9
	Chota Nagpur	Shortt's Island	Shortt's Island	30.043	29.028	29.833	-	-	N88°W	(a) 312	86.6	80.6	81.6	(b) 70.7	75.9
		Puri	Puri	30.063	29.080	29.940	29.905	-	N32°W	242	90.7	88.0	83.2	(c) 67.0	76.1
		Gopalpur	Gopalpur	30.068	29.095	29.945	29.906	-	N41°W	258	91.8	85.1	83.1	(d) 68.0	73.9
		Hasaribagh	Hasaribagh	29.031	27.031	27.880	29.919	-.079	S86°W	316	82.2	46.6	75.8	84.6	66.3
		Lohardaga	Ranchi	27.928	27.031	27.780	29.920	-.058	N79°W	191	84.9	47.7	76.6	85.8	66.2
ASSAM.	Chota Nagpur	Palaman	Daltonganj	29.300	28.992	29.224	29.940	-	S48°W	97	87.1	48.0	80.6	82.1	66.3
		Manbhum	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
		Singhbhum	Chaibasa	29.300	28.993	29.170	29.915	-	N63°W	25	98.9	46.3	84.3	87.5	70.9
		Sibsagar	Sibsagar	29.306	29.243	29.626	29.934	-.084	N22°E	89	79.9	46.0	71.6	82.4	68.1
CHOTA NAGPUR.	.....	Goalpara	Dhubri	29.981	29.438	29.633	29.910	-.080	N89°E	133	81.9	50.8	75.6	86.2	68.9
		Cachar	Silchar	29.992	29.468	29.664	29.923	-.073	S84°E	197	86.6	48.5	81.0	86.7	68.4

a Mean of 26 days. | b Mean of 23 days. | c Mean of 19 days. | d Mean of 23 days.

for the month of February 1898.

DISTRICT OBSERVATIONS.															DISTRICT.	
DATE.	CLOUD.		Rain-fall.	RAINFALL—												
	Mean cloud amount, 8 A.M.	Variation from normal mean, 8 A.M.		Of month.					Since 10th October 1897.							
				Mean of district.	Normal mean.	Variation from mean.	Number of rainy days.	Normal mean number of rainy days.	Mean of district.	Normal mean.	Variation.	Mean number of rainy days.	Normal mean number of rainy days.			
-3	(f) 2.7	+0.8	0.11	0.11	1.05	-0.94	0.80	1.03	3.91	3.56	+0.35	6.80	4.69	Durdwaa.		
-	2.1	-	0.17													
-	(e) 2.7	-	0.12	0.11	0.94	-0.83	0.80	1.89	3.87	3.31	+0.56	6.80	6.02	Birbhum.		
-	(a) 1.8	-	0.35	0.14	1.22	-0.78	1.00	1.03	3.70	4.50	-0.80	6.67	5.01	Bankura.		
-			0.22	1.26	-1.04	0.67	1.77	3.78	4.05	-0.23	6.67	5.63	5.31	Midnapore.		
-	(e) 2.5	+0.4	0.04	Nil.	1.33	-1.33	0.00	3.00	3.82	3.96	-0.14	4.00	5.03	5.03	Howrah.	
-11	(f) 3.1	+0.9	Nil.	Nil.	1.38	1.38	0.00	1.93	4.33	5.19	-0.87	5.28	6.38	6.38	24-Pargannas.	
-	(e) 3.1	-	0.48	0.30	1.44	-0.94	0.40	1.64	5.31	4.11	+1.22	6.00	6.00	6.00	Calcutta.	
-	(f) 2.7	+0.9	0.06	0.08	0.88	-0.80	0.23	1.86	3.46	3.49	-0.03	4.22	4.83	4.83	Nadua.	
+6	(d) 2.0	+0.7	0.00	0.08	1.30	-1.15	0.00	1.75	4.19	4.78	-0.57	6.00	5.84	5.84	Murshidabad.	
-6				0.30	1.18	-0.88	0.67	1.77	2.83	5.00	-2.17	6.33	6.48	6.48	Jessore.	
-	(f) 2.4	-	0.08	0.77	0.70	+0.01	1.20	1.31	3.73	3.90	+0.17	6.00	4.31	4.31	Khulna.	
-	(e) 2.5	-	1.92	1.46	0.37	+0.89	2.30	1.17	3.00	2.30	+0.61	6.00	3.93	3.93	Rajshahi.	
-	(e) 1.7	-	1.49	1.11	0.53	+0.59	2.73	1.08	1.06	2.61	-1.15	5.25	6.41	6.41	Dinajpur.	
-	(b) 0.1	+1.5	2.83		0.53			2.19		4.71			6.74	6.74	Jalpaiguri.	
+19															Darjeeling.	
-	4.8	-	0.99	0.93	0.50	+0.43	1.75	1.25	3.00	2.91	-0.01	5.25	4.36	4.36	Cooch Behar.	
-	2.8	-	1.03	1.43	0.46	+0.95	2.00	1.03	3.54	2.64	+0.90	6.40	3.45	3.45	Rangpur.	
-	(f) 2.6	-	0.15	0.14	1.08	-0.94	1.00	1.65	4.52	2.83	+0.69	6.50	5.83	5.83	Bogra.	
-	(c) 2.6	+2.3	Nil.	Nil.	1.21	-1.24	0.00	1.06	4.19	4.04	-0.15	5.30	6.78	6.78	Pabna.	
+3		-	0.19	0.50	0.93	-0.43	1.13	1.35	4.10	3.86	+0.24	6.00	5.23	5.23	Dacca.	
-	(a) 2.1	-	0.01	Nil.	1.37	-1.37	0.00	1.86	4.03	4.70	-0.67	5.33	6.16	6.16	Mymensingh.	
-	(b) 2.0	-	0.18	0.19	1.15	-0.96	0.67	1.00	3.27	5.65	-2.38	6.30	6.79	6.79	Faridpur.	
-	(a) 2.6	-	0.43		0.92			1.78		4.87			6.92	6.92	Backergunge.	
-	1.5	-	0.02	0.03	1.04	-1.01	0.00	1.70	3.12	6.61	-3.60	4.50	7.04	7.04	Tippera.	
-3	(a) 1.6	-0.4	0.00	0.04	0.50	-0.46	0.30	1.09	6.43	6.69	+1.74	7.20	7.25	7.25	Noakhali.	
-				Nil.	1.23	-1.23	0.00	2.35	9.88	6.28	+3.60	5.00	8.79	8.79	Chittagong.	
+7	(c) 2.7	+0.3	1.31	1.27	0.63	+0.64	2.00	1.34	4.56	2.66	+1.89	6.50	4.21	4.21	{ South Lushai Hills.	
+16	(f) 2.5	+0.3	1.35	1.20	0.63	+0.67	2.11	1.38	5.27	2.40	+2.87	6.78	4.23	4.23	Pawna.	
-	3.1	-	1.08												Shahabad.	
-	(a) 2.9	-	1.87		0.51			1.28		2.83			4.34	4.34		
-	1.9	-	1.95													
-	(e) 2.8	-	0.78	0.97	0.51	+0.46	2.33	1.19	2.88	2.39	+0.49	6.00	4.01	4.01		Saran.
-	0.9	-	1.49	1.11	0.40	+0.63	2.75	1.23	2.37	2.39	-0.12	6.00	3.85	3.85	Champanan.	
-	(e) 1.7	-	0.48		0.47			1.14		2.26			3.55	3.55	Munadarpur.	
+10	(e) 1.8	+0.2	0.57		0.45			1.09		2.09			3.45	3.45	Darbhanga.	
-				1.15	0.76	+0.39	3.20	1.31	6.25	2.48	+3.77	5.00	3.69	3.69	Monghyr.	
-	2.8	-	1.00	0.93	0.36	+0.56	2.67	1.26	4.59	2.36	+2.23	6.01	3.81	3.81	Shegaipur.	
+13	(e) 2.7	+1.0	0.88	0.66	0.43	+0.23	0.26	1.03	2.68	2.18	+0.50	4.68	3.28	3.28	Purnea.	
-	(a) 2.2	-	2.56	2.36	0.63	+2.23	2.75	1.45	5.35	2.70	+2.65	6.75	3.75	3.75	Maldia.	
-	3.1	-	0.24		0.61			1.33		2.06			4.04	4.04	Sonthal Parganas.	
-1	(a) 1.6	-0.3	0.12	0.06	0.73	-0.69	0.13	1.18	4.92	6.28	-1.36	7.51	7.06	7.06	Cuttack.	
-11	(f) 2.2	-1.0	Nil.													
-	1.8	-	1.11.	0.26	1.02	-0.76	0.57	1.76	7.38	4.93	+2.45	7.14	6.71	6.71		{ Balasore.
-	(a) 1.3	-	0.25	Nil.	0.71	-0.67	0.20	1.36	7.49	8.10	-0.70	9.60	7.03	7.03		{ Abbott's Island.
-	1.5	-	0.30												Puri.	
-	0.7	-														
+14	(e) 3.8	+2.0	1.00		0.91			1.74		3.17			4.89	4.89		Hazaribagh.
-	(e) 3.1	-	0.63	0.81	0.74	+0.17	1.00	1.61	4.29	2.39	+1.90	7.00	5.05	5.05		Lohardaga.
-	(e) 2.0	-	1.71	1.96	0.56	+1.40	0.30	1.83	6.08	2.94	+3.94	6.25	4.78	4.78	Palamau.	
-					0.86			1.68		2.34			5.14	5.14	Manbhum.	
-	(a) 1.6	-	1.27	0.86	0.94	-0.08	1.75	1.39	3.96	3.32	-0.66	5.50	5.48	5.48	Singhbhum.	
+2	(a) 2.4	+1.4	2.33												Sibesar.	
+4	(e) 2.3	+1.6	0.82												Goalpara.	
0	(e) 4.3	+1.3	1.34												Cachar.	

Mean of 21 days. | f Mean [days. | g Mean of 21 days. | A Mean of 16 days.

Table of Rainfall recorded at station

Administrative Division.	District.	Station.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
Burdwan.	Burdwan	Kaina	0.10
		Burdwan	0.11
		Kutwa	0.10	0.03
	Birbhum	Raniganj	0.15
		Manikpur	0.08
		Buri	0.10
	Bankura	Hatampur	0.12
		Rampur	0.05
		Bolpur	0.07
	Midnapore	Midnapore	Warari	0.08
Lalpur			...	...	...	...	...	...	...	...	...	...	...	...	0.02	...	...	...	...	...
Bankura			...	...	...	...	...	...	...	...	...	...	...	...	0.12	...	...	...	...	...
Midnapore		Vishnupur	...	...	...	...	...	...	...	...	...	...	...	...	0.13	...	...	...	...	...
		Mahara	...	...	...	...	...	...	...	...	...	...	...	...	0.15	...	...	...	...	...
		Khatra	...	...	...	...	...	...	...	...	...	...	...	...	0.28	...	...	...	...	...
Midnapore		Indra	...	...	...	...	...	...	...	...	...	...	...	...	0.10	...	...	...	...	...
		Kotalpur	...	...	...	...	...	...	...	...	...	...	...	...	0.03	...	...	...	...	...
		Onda	...	...	...	...	...	...	...	...	...	...	...	...	0.18	...	...	...	...	...
		Gangajalghati	...	...	...	...	...	...	...	...	...	...	...	...	0.15	...	...	...	...	...
Hooghly	Hooghly	Baipur	...	...	...	...	...	...	...	...	...	...	...	0.24	...	...	...	...	...	...
		Sonamukhi	...	...	...	...	...	...	...	...	...	...	...	...	0.19	...	...	...	...	...
		Contai	...	...	...	...	...	...	...	...	...	...	...	...	0.04	...	...	...	...	...
	Hooghly	Tamluk	...	...	...	...	...	...	...	...	...	...	...	...	0.40	...	...	...	...	...
		Midnapore	...	...	...	...	...	...	...	...	...	...	...	...	0.07	...	...	...	...	...
		Ghatol	...	...	...	...	...	...	...	...	...	...	...	...	0.11	...	...	...	...	...
	Hooghly	Kukurhaty	...	...	...	...	...	...	...	...	...	...	...	...	0.20	...	...	...	...	...
		Ganubela	...	...	...	...	...	...	...	...	...	...	...	...	0.03	...	...	...	...	...
		Panskura	...	...	...	...	...	...	...	...	...	...	...	...	0.11	...	...	...	...	...
		Dantona	...	...	...	...	...	...	...	...	...	...	...	...	0.02	...	...	...	...	...
Howrah</																					

Bengal in February 1898.

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100	101	102	103	104	105	106	107	108	109	110	111	112	113	114	115	116	117	118	119	120	121	122	123	124	125	126	127	128	129	130	131	132	133	134	135	136	137	138	139	140	141	142	143	144	145	146	147	148	149	150	151	152	153	154	155	156	157	158	159	160	161	162	163	164	165	166	167	168	169	170	171	172	173	174	175	176	177	178	179	180	181	182	183	184	185	186	187	188	189	190	191	192	193	194	195	196	197	198	199	200	201	202	203	204	205	206	207	208	209	210	211	212	213	214	215	216	217	218	219	220	221	222	223	224	225	226	227	228	229	230	231	232	233	234	235	236	237	238	239	240	241	242	243	244	245	246	247	248	249	250	251	252	253	254	255	256	257	258	259	260	261	262	263	264	265	266	267	268	269	270	271	272	273	274	275	276	277	278	279	280	281	282	283	284	285	286	287	288	289	290	291	292	293	294	295	296	297	298	299	300	301	302	303	304	305	306	307	308	309	310	311	312	313	314	315	316	317	318	319	320	321	322	323	324	325	326	327	328	329	330	331	332	333	334	335	336	337	338	339	340	341	342	343	344	345	346	347	348	349	350	351	352	353	354	355	356	357	358	359	360	361	362	363	364	365	366	367	368	369	370	371	372	373	374	375	376	377	378	379	380	381	382	383	384	385	386	387	388	389	390	391	392	393	394	395	396	397	398	399	400	401	402	403	404	405	406	407	408	409	410	411	412	413	414	415	416	417	418	419	420	421	422	423	424	425	426	427	428	429	430	431	432	433	434	435	436	437	438	439	440	441	442	443	444	445	446	447	448	449	450	451	452	453	454	455	456	457	458	459	460	461	462	463	464	465	466	467	468	469	470	471	472	473	474	475	476	477	478	479	480	481	482	483	484	485	486	487	488	489	490	491	492	493	494	495	496	497	498	499	500	501	502	503	504	505	506	507	508	509	510	511	512	513	514	515	516	517	518	519	520	521	522	523	524
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Table of Rainfall recorded at Station

Station.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
Dacca																			
Munshikanj																			
Dacca																			
Narainanj																			
Mymensingh																			
Kishoreganj																			
Atik (Tangail)						0.08	0.43			0.10			0.03						
Mymensingh						0.17							0.02						
Jamulpur						1.20													
Netrokona																			
Subarnakhal						0.30													
Durgapur		0.10				0.20													
Sherpur Town						0.83	0.24												
Diwanganj						0.48	0.92	0.03					0.01						
Faridpur																			
Madaripur																			
Faridpur								0.01											
Goulundo																			
Backergunge																			
Patnakhali																	0.06		
Trojpur						0.30											0.19		
Barisal						0.50													
Gournadi																			
Chola																			
Doulatkhan						0.10													
Bauphal																			
Agartala		1.36	0.60	1.90								0.30							
Hill Tippera																			
Comilla					0.19	0.25													
Chandpur					0.12														
Brahmanbaria			0.17		0.01														
Ramohandrapur								0.30										0.03	
Nasirnagar			0.10	0.02															
Daudkandi																			
Kasba						0.03			0.34										
Laksmi					0.03														
Noakhali					0.06														
Kenny																			
Harishpur					0.02														
Ramganj																			
Chittagong													0.03						
Cox's Bazar																			

Bengal in February 1893—continued.

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100	101	102	103	104	105	106	107	108	109	110	111	112	113	114	115	116	117	118	119	120	121	122	123	124	125	126	127	128	129	130	131	132	133	134	135	136	137	138	139	140	141	142	143	144	145	146	147	148	149	150	151	152	153	154	155	156	157	158	159	160	161	162	163	164	165	166	167	168	169	170	171	172	173	174	175	176	177	178	179	180	181	182	183	184	185	186	187	188	189	190	191	192	193	194	195	196	197	198	199	200	201	202	203	204	205	206	207	208	209	210	211	212	213	214	215	216	217	218	219	220	221	222	223	224	225	226	227	228	229	230	231	232	233	234	235	236	237	238	239	240	241	242	243	244	245	246	247	248	249	250	251	252	253	254	255	256	257	258	259	260	261	262	263	264	265	266	267	268	269	270	271	272	273	274	275	276	277	278	279	280	281	282	283	284	285	286	287	288	289	290	291	292	293	294	295	296	297	298	299	300	301	302	303	304	305	306	307	308	309	310	311	312	313	314	315	316	317	318	319	320	321	322	323	324	325	326	327	328	329	330	331	332	333	334	335	336	337	338	339	340	341	342	343	344	345	346	347	348	349	350	351	352	353	354	355	356	357	358	359	360	361	362	363	364	365	366	367	368	369	370	371	372	373	374	375	376	377	378	379	380	381	382	383	384	385	386	387	388	389	390	391	392	393	394	395	396	397	398	399	400	401	402	403	404	405	406	407	408	409	410	411	412	413	414	415	416	417	418	419	420	421	422	423	424	425	426	427	428	429	430	431	432	433	434	435	436	437	438	439	440	441	442	443	444	445	446	447	448	449	450	451	452	453	454	455	456	457	458	459	460	461	462	463	464	465	466	467	468	469	470	471	472	473	474	475	476	477	478	479	480	481	482	483	484	485	486	487	488	489	490	491	492	493	494	495	496	497	498	499	500	501	502	503	504	505	506	507	508	509	510	511	512	513	514	515	516	517	518	519	520	521	522	523	524
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Table of Rainfall recorded at Station

Division.	District.	Station.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
Bihar - south.	Bhagalpur - concluded.	Bhagalpur	Madhupura	000	000	000	000	0'29	0'13	...	...	000	0'15	000	000	000	000	000	000	000	000
		Bongson	000	000	000	000	0'33	0'09	...	...	000	000	0'16	000	000	000	000	000	000	000	000
		(Sylabad).	000	000	000	000	0'33	0'09	...	...	000	000	0'16	000	000	000	000	000	000	000	000
		Rupaul	000	000	000	000	0'73	0'02	...	...	000	000	0'14	000	000	000	000	000	000	000	000
		Protabganj	000	000	000	000	0'35	0'11	...	...	000	000	0'17	000	000	000	000	000	000	000	000
		Bhagalpur	000	000	000	000	0'33	0'08	...	...	000	000	0'12	000	000	000	000	000	000	000	000
		Banka	000	000	000	000	0'30	...	0'40	...	000	000	...	000	000	000	000	000	000	000	000
		Colong	000	000	000	000	0'46	0'37	...	...	000	000	0'11	000	000	000	000	000	000	000	000
		Banati	000	000	000	000	0'25	0'33	...	...	000	000	0'12	000	000	000	000	000	000	000	000
		Kishanganj	000	000	000	000	0'25	0'47	...	...	000	000	0'13	000	000	000	000	000	000	000	000
Orissa.	Orissa.	Purnea	Araria	000	000	000	000	0'13	0'18	...	...	000	0'16	000	000	000	000	000	000	000	000
		Purnea	Purnea	000	000	000	000	0'14	0'33	...	...	000	0'10	0'01	000	000	000	000	000	000	000
		Gondwana	(Korah).	000	000	000	000	0'16	0'50	...	...	000	0'01	000	000	000	000	000	000	000	000
		Barsoo	Barsoo	000	000	000	000	0'30	0'35	...	...	000	...	000	000	000	000	000	000	000	000
		Forbanganj	Forbanganj	000	000	000	000	0'12	0'05	...	...	000	...	000	000	000	000	000	000	000	000
		Kallaganj	Kallaganj	000	000	000	000	0'50	...	...	...	000	0'17	000	000	000	000	000	000	000	000
		Malda	Malda	000	000	000	000	1'50	0'59	0'11	...	000	0'06	000	000	000	000	000	000	000	000
		Chanchal	Chanchal	000	000	000	000	0'08	0'83	...	...	000	0'03	000	000	000	000	000	000	000	000
		Gajol	Gajol	000	000	000	000	0'25	1'15	0'10	...	000	0'10	0'10	000	000	000	000	000	000	000
		Sibganj	Sibganj	000	000	000	000	1'20	...	...	...	000	0'08	000	000	000	000	000	000	000	000
Orissa.	Orissa.	Northal Paraganas.	Rajmahal	000	000	000	000	0'36	0'71	0'02	...	000	0'08	000	000	000	000	000	000	000	000
		Godda	Godda	000	000	000	000	0'73	0'40	...	...	000	0'08								

Bengal in February 1898—concluded.

28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100	101	102	103	104	105	106	107	108	109	110	111	112	113	114	115	116	117	118	119	120	121	122	123	124	125	126	127	128	129	130	131	132	133	134	135	136	137	138	139	140	141	142	143	144	145	146	147	148	149	150	151	152	153	154	155	156	157	158	159	160	161	162	163	164	165	166	167	168	169	170	171	172	173	174	175	176	177	178	179	180	181	182	183	184	185	186	187	188	189	190	191	192	193	194	195	196	197	198	199	200	201	202	203	204	205	206	207	208	209	210	211	212	213	214	215	216	217	218	219	220	221	222	223	224	225	226	227	228	229	230	231	232	233	234	235	236	237	238	239	240	241	242	243	244	245	246	247	248	249	250	251	252	253	254	255	256	257	258	259	260	261	262	263	264	265	266	267	268	269	270	271	272	273	274	275	276	277	278	279	280	281	282	283	284	285	286	287	288	289	290	291	292	293	294	295	296	297	298	299	300	301	302	303	304	305	306	307	308	309	310	311	312	313	314	315	316	317	318	319	320	321	322	323	324	325	326	327	328	329	330	331	332	333	334	335	336	337	338	339	340	341	342	343	344	345	346	347	348	349	350	351	352	353	354	355	356	357	358	359	360	361	362	363	364	365	366	367	368	369	370	371	372	373	374	375	376	377	378	379	380	381	382	383	384	385	386	387	388	389	390	391	392	393	394	395	396	397	398	399	400	401	402	403	404	405	406	407	408	409	410	411	412	413	414	415	416	417	418	419	420	421	422	423	424	425	426	427	428	429	430	431	432	433	434	435	436	437	438	439	440	441	442	443	444	445	446	447	448	449	450	451	452	453	454	455	456	457	458	459	460	461	462	463	464	465	466	467	468	469	470	471	472	473	474	475	476	477	478	479	480	481	482	483	484	485	486	487	488	489	490	491	492	493	494	495	496	497	498	499	500	501	502	503	504	505	506	507	508	509	510	511	512	513	514	515	516	517	518	519	520	521	522	523	524	525	526	527	528	529	530	531	532	533	534	535	536	537	538	539	540	541	542	543	544	545	546	547	548	549	550	551	552	553	554	555	556	557	558	559	560	561	562	563	564	565	566	567	568	569	570	571	572	573	574	575	576	577	578	579	580	581	582	583	584	585	586	587	588	589	590	591	592	593	594	595	596	597	598	599	600	601	602	603	604	605	606	607	608	609	610	611	612	613	614	615	616	617	618	619	620	621	622	623	624	625	626	627	628	629	630	631	632	633	634	635	636	637	638	639	640	641	642	643	644	645	646	647	648	649	650	651	652	653	654	655	656	657	658	659	660	661	662	663	664	665	666	667	668	669	670	671	672	673	674	675	676	677	678	679	680	681	682	683	684	685	686	687	688	689	690	691	692	693	694	695	696	697	698	699	700	701	702	703	704	705	706	707	708	709	710	711	712	713	714	715	716	717	718	719	720	721	722	723	724	725	726	727	728	729	730	731	732	733	734	735	736	737	738	739	740	741	742	743	744	745	746	747	748	749	750	751	752	753	754	755	756	757	758	759	760	761	762	763	764	765	766	767	768	769	770	771	772	773	774	775	776	777	778	779	780	781	782	783	784	785	786	787	788	789	790	791	792	793	794	795	796	797	798	799	800	801	802	803	804	805	806	807	808	809	810	811	812	813	814	815	816	817	818	819	820	821	822	823	824	825	826	827	828	829	830	831	832	833	834	835	836	837	838	839	840	841	842	843	844	845	846	847	848	849	850	851	852	853	854	855	856	857	858	859	860	861	862	863	864	865	866	867	868	869	870	871	872	873	874	875	876	877	878	879	880	881	882	883	884	885	886	887	888	889	890	891	892	893	894	895	896	897	898	899	900	901	902	903	904	905	906	907	908	909	910	911	912	913	914	915	916	917	918	919	920	921	922	923	924	925	926	927	928	929	930	931	932	933	934	935	936	937	938	939	940	941	942	943	944	945	946	947	948	949	950	951	952	953	954	955	956	957	958	959	960	961	962	963	964	965	966	967	968	969	970	971	972	973	974	975	976	977	978	979	980	981	982	983	984	985	986	987	988	989	990	991	992	993	994	995	996	997	998	999	1000
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WEATHER during February was more disturbed than usual. The daily changes in pressure and temperature were large at times, and almost throughout the month the variations from the normal were much greater than usual.

Three disturbances occurred,—two in the early part of the month about the 7th and 11th, and the third between the 16th and 22nd. Rainfall was fairly general during the passage of the first two, but the distribution was abnormal in consequence of a larger proportion than usual falling in the north of the province, apparently to the loss of the southern divisions. The average fall in Bihar and North Bengal was half an inch in excess, while in Lower Bengal and Orissa there was, in comparison with the fall, a large defect, varying from $\cdot 7$ to nearly 1 inch. No rain fell during the disturbance towards the end of the month, but the changes of pressure and temperature were unusually rapid, defect in pressure at one time being as much as $\cdot 5$ inch. The apparent reason for the irregular distribution of rainfall during the early part of the month and its entire absence during the last week is the northerly displacement of the central area of the depressions. During some seasons this area of lowest pressure passes eastward across Lower Bengal and Orissa, in which case continued cloudy weather obtains for some days, as was the case, in the early part of 1897. The mean course is over the central parts of the province, and then the distribution of the rainfall is most regular. During the present season the course taken by the depressions has been much more to the north than usual, so that the southern parts of the province have received comparatively little rain and the falls increase in amount towards the north, being comparatively heavy over the hills.

At the beginning of February the pressure distribution was very nearly normal over the Bay with temperature also nearly normal, but low. Over the province it was different. Pressure diminished towards the north. Winds were southerly and temperature was from 2° to 5° above the normal. The brisk fall of pressure on the 2nd and south-easterly winds in the west of Bihar showed the approach of a depression towards the northern districts. Winds were south or south-west in Lower Bengal and there was a further increase of temperature, but over the Bay practically no change occurred. The fall of temperature continuing slowly a fairly well marked depression was shown over the province on the 3rd with irregular cyclonic winds and very high temperature for the season, excess varying from 5° to 10° . There was, however, very little cloud and no rain except a few light showers in the hills. A change began on the 4th with a brisk rise of pressure in the north-east followed by a continued rise on the 5th and a fall in the western districts, in consequence of which the depression became deeper over Bihar and a steep gradient obtained over the whole province, but especially in the north. Rainfall was fairly general over North Bengal on the 4th, but on the 5th it was general and heavy over the whole of the north of the province. Though the depression filled up quickly on the 6th, there was still rain at most of the northern stations. The rainfall extended southwards, but occurred in the south of the province only as scattered showers.

The fall of temperature began in the north, and as was the case with the rainfall extended southwards. On the 6th the difference of mean temperature from the normal varied from defect of 2° in the extreme north of North Bengal to excess of nearly 10° in part of Lower Bengal; on the 7th there was defect except in Lower Bengal where excess was much smaller, and on the 8th there was normal temperature over the whole province.

The normal distribution of pressure and temperature, with the usual northerly winds, which became established by the 8th, was of only short duration, as though pressure continued to rise rather quickly on the 9th the easterly winds in Bihar showed the approach of another depression. Temperature was also being affected, as in the west of Bihar there was excess of more than 5° . On the 11th the depression was over the western districts and rainfall was general especially in Bihar. The depression was shallow and passed quickly eastward, the rainfall on the 12th being much more scattered than on the previous day. It had ceased to affect weather on the 13th. Winds were westerly or north-westerly at all stations, rainfall had ceased and temperature had fallen especially in the western districts where a moderate defect prevailed.

For some days subsequent to the 13th ordinary weather prevailed over the Bay and the province. Pressure oscillations continued on a scale rather larger than usual at inland stations and the gradient was moderately steep over the Bay from north-west south-eastward. Light rain continued in parts of North Bengal, chiefly in the hills.

Pressure began to fall on the 16th and continued briskly or rapidly till the 19th when there was a large defect over the whole province with a deep depression in the extreme north-east. At Julpauri, Dhubri and Sibsagar defect was very little under half an inch. As readings diminished steadily towards the north, and the winds remained westerly during the passage of this depression, the central area was evidently to the north of the province. The westerly winds being dry, cloudless weather with high temperature obtained. Between the 19th and 20th a rapid fall of temperature set in along with the recovery of pressure. On the former date mean temperature was generally 5° and in places as much as 5° above the normal. On the 20th there was defect everywhere varying from 2° in the east to 8° in the west of the province. The rapid rise of pressure continued till the 22nd when the

difference from the normal was small at inland stations, but the distribution over the Bay became similar to what had obtained before the disturbance. Being relatively low over the south-east of the Bay a rather steep gradient was established with steady north-westerly winds and temperature everywhere below the normal by from 5° to 10°. This arrangement continued with little or no change, except a slow rise of temperature till the end of the month.

Pressure.—As stated above pressure changes have been much larger than usual and at times of disturbance were more prolonged than is usual at this season of the year. The most marked case of these large changes was between the 16th and 22nd when a deep depression passed eastward with its central area over the hills. The fall continued rapidly for three days, and the recovery was equally prolonged. Owing to the unusual depth of the depression during those days the monthly means are much below the normal, most so in Bengal Proper and Bihar, where defect is very little under .1 inch. In Orissa and Chota Nagpur the defect is smaller, but generally over .06 inch.

Temperature was very high for the season in the early part of the month, and, though it fell after the disturbances about the 6th and 11th, it generally remained above the normal. For some days about the middle of the month the difference from the normal was small, but towards the 19th there was again a large excess which gave way after the depression passed eastward. From that date till the end of the month cool weather prevailed. As there was a large excess during the greater part of the first half of the month and a defect towards the end, the means for the whole month differ by only small amounts from the normal. The greatest excess is 1° in North and East Bengal, and the difference in other parts is half a degree, except in Orissa, where there is defect of about 1°.

Rainfall was more heavy than usual in the north of the province and lighter than usual in the southern districts. In South-West Bengal and Orissa between a tenth and a fifth of an inch fell, and in East Bengal a third instead of 1 inch on an average, whereas in North Bengal and Bihar the average fall was more than 1 inch instead of the normal half an inch. Most of the fall occurred on or about two dates, the 6th and 11th, except in the hill districts of North Bengal, where light showers were more frequent. The latter half of the month was almost entirely rainless.

The following table gives the summary of the temperature and rainfall data of each of the seven meteorological divisions of the Province for the month of February 1898:—

METEOROLOGICAL DIVISIONS.	TEMPERATURE.							RAINFALL.						
	Highest observed during month.	Lowest observed during month.	Averages for month.			Average mean of month above or below normal mean of month.	Of month.			Rainy days.			Since 16th October 1897.	
			Of highest of each day.	Of lowest of each day.	Of mean for each day.		Average.	Normal average.	Variation.	Average number in month.	Normal average number in month.	Variation.	Average.	Normal average.
South-West Bengal	94.3	64.8	83.3	59.0	70.7	+0.4	0.17	1.10	-0.93	0.48	1.68	-1.18	3.55	4.07
North Bengal	86.9	47.0	76.9	55.0	66.0	+1.1	1.05	0.65	+0.40	1.90	1.34	+0.66	3.21	2.91
East "	86.7	45.0	80.7	57.4	69.1	+0.9	0.81	0.99	-0.68	0.98	1.63	-0.64	4.61	5.54
Bihar	88.0	48.5	77.1	54.6	65.8	+0.6	1.12	0.56	+0.56	2.18	1.90	+0.28	4.36	2.46
Orissa	96.4	50.5	84.5	63.6	74.0	-0.9	0.13	0.83	-0.70	0.35	1.40	-1.05	6.47	6.29
Chota Nagpur*	93.9	46.6	79.0	55.9	67.4	+0.4	0.95	0.83	+0.13	1.95	1.54	+0.11	4.82	3.08
Assam	86.5	46.0	76.1	54.8	65.5	0								

* Daltonganj not included.

METEOROLOGICAL OFFICE, BENGAL,

The 15th March 1898.

C. LITTLE,

Meteorological Reporter to the Govt. of Bengal.

Results of the Meteorological Observations taken at the Alipore Observatory from 6th to 12th March 1898.

Month.	Date.	Maximum in sun.	Number of hours of bright sunshine.	Mean pressure barometer at 32° Fahr.	TEMPERATURE.				HYGROMETRY.				WIND.		Rain.	WEATHER.
					Mean.	Maximum.	Range.	Minimum.	Mean wet bulb.	Vapour tension.	Dew point.	Humidity.	Prevailing direction.	Miles recorded.		
1898.				Inches.	°	°	°	°	°	Inches.	°	%			Inches.	
March	6th	138.5	9.3	29.979	67.5	81.5	28.5	53.0	56.7	0.319	46.6	52	WNW, NNW, and calm.	36	Nil	Clear.
"	7th	139.5	9.7	29.902	69.3	84.0	29.8	54.2	68.0	0.333	47.8	51	NNW, WNW, and calm.	47	"	Clear.
"	8th	142.7	10.1	29.928	71.1	88.4	31.5	56.9	60.9	0.400	52.8	59	SW and WNW	74	"	Clear.
"	9th	142.8	9.4	29.926	73.0	89.8	32.4	57.4	62.8	0.438	55.2	60	WSW, SW, and calm.	73	"	Clear.
"	10th	142.7	9.2	29.862	74.7	90.9	29.2	61.7	65.8	0.502	59.0	64	WNW and calm	27	"	Clear.
"	11th	145.5	9.6	29.832	77.5	94.0	31.9	63.0	66.6	0.508	59.4	59	WNW and calm	35	"	Clear.
"	12th	145.5	8.6	29.888	78.8	93.8	27.4	66.4	69.4	0.594	63.8	60	Calm and variable	26	"	Clear, =

The mean pressure of the seven days	...	...	...	Inches.
The average pressure of the corresponding period for 24 years, Surveyor-General's Office	...	...	...	29.911
The total number of hours of bright sunshine	...	...	...	Hours.
The maximum possible number of hours of sunshine	...	...	...	65.9
The mean temperature of the seven days	...	...	...	73.1
The average temperature of the corresponding period for 24 years, Surveyor-General's Office	...	...	...	78.3
The extreme variation of temperature	...	...	...	41.9
The maximum temperature	...	...	...	99.4
The highest velocity of the wind in one hour	...	...	...	Miles.
The mean relative humidity	...	...	...	58
The average relative humidity of the corresponding period for 24 years, Surveyor-General's Office	...	...	...	69
The total fall of rain from 6th to 12th March 1898	...	...	...	Inches.
The average fall of the corresponding period for 24 years, Surveyor-General's Office	...	...	...	Nil.
The total fall from 1st January to 12th March 1898	...	...	...	0.31
The average fall of the corresponding period for 24 years, Surveyor-General's Office	...	...	...	0.36
	...	...	...	2.28

The mean pressure, temperature, &c., are deduced from the traces of the Barograph and Thermograph, and from observations made at 6h., 10h., 16h., and 22h.

The maximum and minimum temperatures are obtained from self-registering thermometers. All the thermometers are verified and the readings have been corrected to a standard constructed and verified at the Kew Observatory. They are exposed under a thatched shed open at the sides, and are suspended four feet above the ground.

The barometer readings are corrected approximately to those of the standard, Newman's No. 86, formerly at the Surveyor-General's Office.

The hygrometric elements are obtained from Tables III, IV, and V of the official tables computed in the Meteorological Office, and based on Regnault's modifications of August's formula.

The directions and the movement of the wind are taken from the trace of a Beckley's anemograph.

The mouth of the rain-gauge is one foot above the ground.

=, fog.

METEOROLOGICAL OFFICE, GOVT. OF INDIA,
Calcutta, the 14th March 1898.

J. H. GILLILAND,
For Meteorological Reporter to the Govt. of India.

Results of the Barometrical and Thermometrical Observations taken at the Meteorological Office, Chowringhee, from 6th to 12th March 1898.

MONTH.	Date.	Pressure at 10 A.M. corrected and reduced to 32° Fahr.	TEMPERATURE.						HYGROMETRY.			Rainfall, past 24 hours.
			Daily mean.	Maximum.	Range.	Minimum.	Dry bulb at 10 A.M.	Wet bulb at 10 A.M.	Vapour tension at 10 A.M.	Dew point at 10 A.M.	Humidity at 10 A.M.	
1898.		Inches.	°		°	°	°	°	Inches.	°	%	Inches.
March	6th	30.663	69.4	84.0	29.3	54.7	76.6	59.7	.289	44.0	31	Nil.
"	7th	" .039	69.8	85.1	30.7	54.4	76.6	59.7	.289	44.0	31	"
"	8th	29.992	74.7	89.5	29.6	59.9	79.6	69.6	.590	63.6	58	"
"	9th	" .994	75.6	91.8	32.4	59.4	81.6	65.6	.418	54.0	39	"
"	10th	" .928	77.5	92.0	29.1	62.9	79.7	69.6	.589	63.6	58	"
"	11th	" .908	79.9	95.8	31.9	68.9	85.6	69.1	.491	58.4	40	"
"	12th	" .916	81.8	95.2	26.8	68.4	81.6	74.5	.760	71.0	71	"

The mean 10 A.M. pressure of the seven days Inches. 29.981

The mean temperature of the seven days 75.5

The extreme variation of temperature 41.4

The maximum temperature 95.8

The mean 10 A.M. relative humidity of the seven days % 47

The total fall of rain from 6th to 12th March 1898 Inches. Nil.

The daily mean temperatures are the crude means of maximum and minimum temperatures.

METEOROLOGICAL OFFICE, BENGAL,

C. LITTLE,

The 14th March 1898.

Meteorological Reporter to the Govt. of Bengal.

CIRCULAR AND EASTERN CANALS.

Approximate Return of Traffic for the week ending Saturday, the 12th March 1898, as compared with the corresponding week of the previous year.

NATURE OF CARGO.			WEEK ENDING SATURDAY, THE 12TH MARCH 1898.			WEEK ENDING SATURDAY, THE 13TH MARCH 1897.		
			Number of boats.	Weight of cargo.	Tollage.	Number of boats.	Weight of cargo.	Tollage.
			No.	Mds.	Rs.	No.	Mds.	Rs.
Rice and paddy	...	...	591	2,21,480	3,839	399	1,01,600	1,553
Jute	...	...	221	1,11,065	1,627	36	25,475	364
Firewood	...	...	79	59,425	1,108	55	40,600	608
Other articles	...	...	803	1,95,325	2,970	788	2,35,450	3,593
Total	...	...	1,694	5,87,295	9,544	1,278	4,03,025	6,118

EAST INDIAN RAILWAY.

Statement of Goods Traffic in Staples carried during the four weeks and one day ending 29th January 1898
as compared with the same period of 1897.

STAPLES.	1897.		1898.		INCREASE.		DECREASE.	
	Weight.	Freight.	Weight.	Freight.	Weight.	Freight.	Weight.	Freight.
	Mds.	Rs.	Mds.	Rs.	Mds.	Rs.	Mds.	Rs.
Coal & Coke carried for the public and foreign railways	74,97,773	9,41,000	80,88,743	11,03,733	5,90,960	1,62,736	...	...
Cotton, raw	1,78,769	1,00,003	1,40,301	68,709	...	...	38,468	31,984
Cotton, manufactured—								
1.—Twist & Yarn, European	4,447	4,973	7,240	5,052	2,793	79	...	...
2.—Ditto, Indian	31,074	14,910	30,170	16,550	...	634	896	...
3.—Piece-goods—European	96,220	50,185	1,01,082	1,01,510	4,403	12,325	...	...
4.—Ditto —Indian	16,623	9,742	19,507	10,108	2,874	306	...	...
Drugs and Chemicals—								
1.—Intoxicating, other than opium	401	876	171	80	...	...	230	794
2.—Non-intoxicating	7,480	5,688	23,364	11,228	15,875	5,540	...	...
Dyes and Tans—								
1.—Indigo	18,861	21,041	17,773	22,162	...	231	1,088	...
2.—Myrabolams	23,208	6,885	20,038	5,949	...	2,570	...	986
3.—Cutch	1,625	1,003	2,645	1,300	1,120	387	...	...
4.—Turmeric	5,238	3,064	8,736	6,016	3,504	9,952	...	...
5.—Aniline dyes	20	13	53	63	33	50	...	...
6.—Others	1,611	698	5,777	1,354	4,266	656	...	...
Grain and Pulse—								
1.—Wheat	1,36,890	32,771	3,06,615	1,04,350	1,69,719	71,579	...	...
2.—Rice in the husk	1,05,950	21,616	78,793	8,885	...	87,166	15,761	...
3.—Rice not in the husk	18,07,215	4,65,165	8,58,534	1,66,165	...	5,44,681	3,09,010	...
4.—Jowar and bajra	80,060	13,505	1,44,103	10,318	64,607	1,808	...	...
5.—Gram & pulse	7,40,578	2,34,810	3,35,316	81,618	...	4,11,362	1,53,997	...
6.—Others	2,70,902	60,556	1,68,216	37,780	...	1,02,686	28,707	...
Hides and Skins—								
1.—Hides of cattle	87,156	57,085	92,478	57,568	5,312	483	...	...
2.—Skins of sheep, &c.	12,380	4,347	14,787	8,114	2,357	3,767	...	...
Horns	737	440	590	401	...	188	...	45
Jobs—								
1.—Raw	97,994	28,220	4,13,715	72,633	3,15,721	47,313	...	...
2.—Gunny-bags and cloth	77,063	33,531	97,080	69,405	19,307	25,874	...	...
Lao—								
1.—Stick	30,512	13,545	38,495	14,231	1,983	680	...	...
2.—Shell	28,270	24,433	26,480	21,703	...	1,781	1,670	...
Leather, manufactured	3,955	5,109	12,414	8,055	8,460	2,946	...	...
Liquors—								
1.—Beer	14,308	5,504	17,063	4,029	2,670	...	875	...
2.—Spirits	1,437	2,168	2,111	2,478	630	310	...	...
3.—Wines	1,947	3,014	3,552	5,904	1,905	2,400	...	...
Metals—								
1.—Copper, unwrought	436	525	637	680	191	164	...	...
2.—Brass, ditto	1,942	1,320	2,768	1,423	816	97	...	...
3.—Copper, wrought	1,780	1,783	2,288	1,913	608	130	...	...
4.—Brass, ditto	18,161	7,707	17,024	8,636	...	1,127	631	...
5.—Iron	1,70,774	80,812	1,80,001	66,888	9,217	19,924	...	...
6.—Others	17,523	11,636	9,897	6,685	...	7,668	4,971	...
7.—Zinc & spelter	1,074	642	1,808	1,261	734	600	...	...
Oils—								
1.—Kerosine	1,19,023	55,464	1,23,019	52,851	...	6,904	3,183	...
2.—Castor	2,020	787	3,219	853	509	196	...	...
3.—Cocunut	2,930	965	4,033	1,315	1,103	350	...	...
4.—Others	14,940	7,913	14,804	6,175	...	86	1,738	...
Oil-seeds—								
1.—Linseed	70,265	31,180	1,55,784	40,913	76,523	19,793	...	...
2.—Rape and mustard	1,35,164	37,611	1,48,883	27,115	23,175	...	10,496	...
3.—Til or jingili	63,255	10,833	1,08,440	18,326	53,185	7,473	...	...
4.—Poppy	5,798	1,832	8,686	2,417	2,788	1,016	...	...
5.—Peanuts	151	163	719	254	568	75	...	...
6.—Castor	24,089	5,850	40,236	11,693	22,147	5,834	...	...
7.—Others	1,825	297	30,243	6,220	28,731	5,933	...	...
Opium	67,613	49,175	81,696	35,650	...	15,917	13,619	...
Paper and pasteboard	14,804	7,151	10,463	9,151	4,340	2,000	...	...
Provisions—								
1.—Ghee	41,535	80,440	40,960	33,376	4,565	2,937	...	...
2.—Dried fruits and nuts	16,429	6,560	14,084	8,141	...	1,581	1,745	...
3.—Others	46,083	26,424	65,948	33,468	8,966	7,044	...	...
4.—Potatoes	70,383	19,337	69,564	16,184	...	401	3,158	...
Railway plant & rolling-stock carried for the public & foreign railways—								
1.—Locomotive engines & tenders & parts thereof	563	88	3,008	1,164	2,445	1,106	...	...
2.—Carriages & trucks & parts thereof	22,155	901	4,645	1,432	...	441	17,510	...
3.—Steel rails & fish-plates	15,320	2,530	1,09,651	10,500	94,231	17,030	...	...
4.—Sleepers & keys of steel & cast iron	...	...	16,183	1,533	16,183	1,533	...	...
5.—Other carts	1,80,993	55,374	96,170	19,089	...	90,825	15,38	...
Ball	5,80,407	1,03,587	4,85,442	90,901	...	40,965	12,806	...
Salt, &c.—								
1.—Salt	90,621	37,704	68,808	24,246	...	21,813	18,255	...
2.—Other saline substances	59,360	11,194	47,980	14,482	9,404	3,288	...	...
Silk, raw—								
1.—Foreign	130	43	56	7	...	80	80	...
2.—Indian	4,316	1,923	6,174	3,895	1,868	772	...	...
Silk piece-goods—								
1.—Foreign	13	1	35	93	22	92	...	...
2.—Indian	58	73	535	652	477	590	...	...

STAPLES.	1897.		1898.		INCREASE.		DECREASE.	
	Weight.	Freight.	Weight.	Freight.	Weight.	Freight.	Weight.	Freight.
	Mds.	Rs.	Mds.	Rs.	Mds.	Rs.	Mds.	Rs.
Spices—								
1.—Betel-nuts	17,760	14,817	13,974	11,070	...	...	3,786	3,739
2.—Pepper	1,521	853	1,074	1,326	163	473	...	...
3.—Ginger	2,704	1,297	2,276	804	...	...	428	...
4.—Chillies	19,094	8,956	30,412	28,400	11,718	19,534	...	...
5.—Cardamoms	1,139	1,379	676	807	...	...	463	513
6.—Others	1,089	906	1,089	645	...	...	909	201
Stone and lime	3,73,806	56,356	4,46,347	87,619	70,539	31,263	...	...
Sugar—								
1.—Refined	10,430	4,168	10,280	7,161	8,831	2,963	...	...
2.—Unrefined	6,36,323	1,10,561	7,36,054	1,23,343	88,761	12,821	...	...
Tea—								
1.—Foreign	...	...	...	...	...	...	...	...
2.—Indian	2,259	1,343	1,655	1,143	...	...	604	209
Timber	1,28,010	20,265	1,26,793	18,633	...	...	1,217	1,633
Iron ore	7,091	3,978	85,309	18,649	27,704	14,071	...	...
Wool, raw	2,907	2,102	4,087	1,402	1,070	...	...	790
Wool, manufactured—								
1.—Piece-goods, European	410	493	212	230	...	...	198	263
2.—" Indian	6,116	4,021	3,221	3,005	...	...	2,895	1,016
3.—Shawls	...	...	...	...	...	...	...	...
All other articles of merchandise—								
1.—Firewood	22,890	1,271	67,106	1,914	24,306	643	...	...
2.—Indigo seed	1,17,748	4,042	1,94,726	51,763	16,978	7,921	...	...
3.—Mowah flower	61,578	13,072	11,563	2,313	...	...	30,012	10,750
4.—Oil-cake	50,336	12,069	53,926	9,000	3,090	...	...	3,000
5.—Paints & colours	9,441	2,782	10,007	5,682	1,226	2,900	...	...
6.—Seeds other than oilseeds	77,442	21,023	93,307	20,502	16,865	7,809	...	...
7.—Wooden articles	9,359	4,213	11,335	5,551	4,396	1,278	...	...
8.—Others	9,60,889	3,13,940	4,67,598	1,67,771	...	...	5,21,691	1,40,178
Total	1,63,57,504	34,38,641	1,62,69,230	31,57,485	...	...	97,274	2,91,196
Military stores	14,771	22,075	77,222	67,465	62,451	46,300	...	...
Coal for railway	10,41,317	82,105	8,56,946	76,554	...	...	1,86,321	6,551
Railway materials	12,88,617	62,133	10,11,438	57,654	...	15,521	2,77,179	...
Live-stock	...	27,516	...	2,024	...	1,518	...	...
Total	1,77,04,200	36,12,500	1,72,05,890	33,67,692	...	...	4,69,323	2,24,818

C. W. CLARKE, Assistant Auditor.

TRAFFIC AUDIT OFFICE, GOODS DIVISION, JAMALPUR, the 7th March 1898.

EASTERN BENGAL STATE RAILWAY.

Abstract of principal Commodities carried over the Eastern Bengal State Railway during the month of December 1897, as compared with the same month of the previous year.

STAPLES.	1897.		1896.		Total.		Increase.	Decrease.
	Up.	Down.	Up.	Down.	1897.	1896.		
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
Coal and Coke carried for the Public and Foreign Railways.	9,644	12,108	11,586	5,856	21,747	16,822	4,865	.....
Cotton, raw	98	219	86	590	415	678	.....	261
Cotton, manufactured—								
Twist and yarn, European	300	.....	246	.....	300	246	.....	46
Ditto, Indian	270	278	151	219	454	370	184	.....
Piece-goods, European	2,805	5	2,348	7	2,910	2,355	555	.....
Ditto, Indian	101	4	86	8	105	94	11	.....
Drugs and Chemicals—								
Intoxicating, other than opium	2	1	1	.....	3	1	2	.....
Non-intoxicating—								
Cinchona bark	186	7	73	1	183	74	119	.....
Others .....	.....	.....	.....	.....	.....	.....	.....	.....
Dyes and Tans—								
Indigo .....	.....	368	.....	219	368	219	149	.....
Myrabolams	43	.....	64	.....	43	64	.....	11
Cutch	57	201	5	105	248	119	129	.....
Turmeric .....	.....	.....	.....	.....	.....	.....	.....	.....
Aniline dyes	16	1	28	.....	17	28	.....	19
Others .....	.....	.....	.....	.....	.....	.....	.....	.....
Grain and pulse—								
Wheat	89	4	23	1	93	24	69	.....
Rice in the husk	1,973	2,862	4,440	4,043	4,831	9,092	.....	4,267
Rice not in the husk	3,577	1,441	8,634	2,124	4,818	7,536	.....	2,738
Jowar and bajra .....	.....	.....	.....	.....	.....	.....	.....	.....
Gram and pulse	2,094	1,303	2,832	3,740	3,827	6,022	.....	2,695
Others	125	146	70	66	270	123	143	.....
Hides and skins—								
Hides of cattle—								
Dressed or tanned .....	.....	.....	.....	.....	.....	.....	.....	.....
Raw .....	.....	.....	.....	.....	.....	.....	.....	.....
Skins of sheep, &c.—	30	1,331	10	557	1,361	567	794	.....
Dressed or tanned .....	.....	.....	.....	.....	.....	.....	.....	.....
Raw .....	.....	.....	.....	.....	.....	.....	.....	.....
Horns	7	1	.....	6	8	8	.....	.....
Jute—								
Raw	219	78,600	23	40,791	79,099	41,814	32,285	.....
Gunny-bags and cloth	389	1,231	406	1,701	1,040	2,167	.....	267
Lac—								
Stick .....	.....	102	.....	64	102	64	36	.....
Shell .....	.....	.....	.....	.....	.....	.....	.....	.....
Leather, manufactured	90	.....	79	1	90	80	10	.....
Liquors—								
Beer	41	9	54	15	80	69	.....	19
Spirits	3	.....	4	.....	3	4	.....	1
Wines	87	5	93	.....	82	93	.....	1
Metals—								
Copper, unwrought .....	.....	.....	.....	.....	.....	.....	.....	.....
Brass, ditto .....	.....	.....	.....	.....	.....	.....	.....	.....
Copper, wrought .....	.....	.....	.....	.....	.....	.....	.....	.....
Brass, do.	167	60	170	47	233	217	16	.....
Iron	1,831	198	1,972	82	1,939	2,054	.....	115
Others	115	33	123	8	148	129	19	.....
Oil—								
Kerosine	29,735	58	10,376	133	29,813	10,428	19,385	.....
Castor	6	.....	5	.....	6	5	.....	.....
Coconut	91	.....	72	.....	91	72	19	.....
Others	208	11	360	1	219	361	.....	42
Oilseeds—								
Linseed	3	790	.....	200	793	240	553	.....
Rape and mustard	78	1,222	201	771	1,300	973	327	.....
Tu or junjili	1	68	2	206	69	270	.....	201
Poppy	3	.....	4	.....	3	4	.....	1
Karantute .....	.....	.....	.....	.....	.....	.....	.....	.....
Castor .....	.....	.....	.....	.....	.....	.....	.....	.....
Others	8	55	29	8	63	87	24	.....
Opium .....	.....	.....	.....	.....	.....	.....	.....	.....
Paper and pasteboard	280	5	183	243	281	411	.....	130
Provisions—								
Ghee	81	1	64	9	82	73	9	.....
Dried fruits and nuts .....	.....	.....	.....	.....	.....	.....	.....	.....
Others	870	667	940	513	1,837	1,453	384	.....
Railway plant and rolling-stock carried for the Public and Foreign Railways—								
Locomotives, engines, and tenders and parts thereof .....	.....	.....	.....	.....	.....	.....	.....	.....
Carrriages and trucks and parts thereof .....	.....	.....	.....	.....	.....	.....	.....	.....
Materials—								
Steel rails and fish-plates, sleepers, and keys of steel and cast-iron	103	.....	224	.....	103	224	.....	219
Other sorts	44	1	101	.....	45	101	.....	56
Salt	4,627	90	6,943	128	4,723	7,060	.....	2,344
Sulphate, &c.—								
Sulphate	7	.....	5	.....	7	5	2	.....
Other saline substances .....	.....	.....	.....	.....	.....	.....	.....	.....
Silk, raw—								
Moratan .....	.....	.....	.....	.....	.....	.....	.....	.....
Indian .....	.....	13	.....	14	13	14	.....	1

STAPLES.	1897.		1898.		Total.		Increase.	Decrease.
	Up.	Down.	Up.	Down.	1897.	1898.		
Silk rice-goods—								
Foreign
Indian—								
Muga
Mori
Spices—								
Betel-nuts
Pepper
Cloves
Cardamoms
Others
Stone and lime
Sugar—								
Refined or crystallized, including sugar-candy.
Unrefined, viz., molasses and jaggery or gur, and other saccharine produce.
Tea—								
Foreign
Indian
Timber
Tobacco—								
Unmanufactured
Manufactured—								
Cigars
Other sorts
Wool, raw
Wool, manufactured—								
Piece-goods, European
Ditto, Indian
Shawls
All other articles of merchandise
Total

CALCUTTA, the 14th March 1898.

H. STUART,
Examiner of Accounts.

Weekly Return of Traffic Receipts on Indian Railways.

EAST INDIAN RAILWAY.

Approximate Return of Traffic for week ended 5th March 1898 on 1,705.09 miles open.

	COACHING TRAFFIC.		MERCHANDISE AND MINERAL TRAFFIC.		Other earnings (estimated).	Total earnings.	TRAFFIC TRAIN-MILES RUN.		
	Number of passengers.	Coaching receipts.	Weight carried.	Receipts.			Coaching.	Merchandise.	Total.
		Rs. A. P.	Mds. S.	Rs. A. P.	Rs. A. P.	Rs. A. P.			
Total traffic for the week ...	318,003*	3,39,499 9 0*	45,26,579 0	8,53,535 11 0	21,896 0 0	12,15,311 4 0	93,093	165,091	2,58,184
Or per mile of railway ...		199 5 6		500 9 3	12 13 6	712 12 3			
For previous 9 weeks of half-year.	2,716,791†	28,53,183 13 0†	3,47,45,282 30†	1,08,39,606 4 0	1,72,808 0 0‡	99,44,488 1 0	793,139‡	1,376,167‡	2,169,306‡
Total for 9 weeks ...	3,035,484	32,73,683 6 0	3,92,71,861 29	1,70,02,231 15 0	1,94,804 0 0	1,11,50,819 5 0	886,531‡	1,431,198‡	2,317,729‡
COMPARISON.									
Total for corresponding week of previous year ...	338,426‡	3,62,490 9 4	30,67,493 30	8,43,770 6 8	26,956 11 9	12,53,167 11 0	87,693	156,103	243,796
Per mile of railway corresponding week of previous year ...	.....	212 14 7	.....	495 10 9	15 13 5	734 6 9	.....	.....	.....
Total for corresponding 9 weeks of previous year ...	2,905,049‡	30,93,630 3 8	3,75,05,243 0	77,76,924 9 11	2,01,100 3 4	1,10,73,916 2 11	854,711	1,392,533	2,247,244

* The decrease is due to "Sivaratree mela" in the corresponding week of 1897.

† Audited No. of passengers 29,048 and deducted Rs. 13,235

‡ Do. Mds. 53,368 and

§ Do.

on account of difference between the approximate and audited figures for the week ended 22nd January 1898.

TARKESSUR BRANCH RAILWAY.

Approximate Return of Traffic for week ended 5th March 1898 on 22.23 miles open.

	COACHING TRAFFIC.		MERCHANDISE AND MINERAL TRAFFIC.		Other earnings (estimated).	Total earnings.	TRAFFIC TRAIN-MILES RUN.		
	Number of passengers.	Coaching receipts.	Weight carried.	Receipts.			Coaching.	Merchandise.	Total.
		Rs. A. P.	Mds. S.	Rs. A. P.	Rs. A. P.	Rs. A. P.			
Total traffic for the week ...	22,700*	6,364 12 0*	20,091 0	764 11 0	8 0 0	7,137 7 0	1,095	115	1,210
Or per mile of railway ...	.....	286 5 0		34 6 5	0 5 9	321 1 2			
For previous 9 weeks of half-year.	211,648†	53,688 13 0†	1,37,456 30†	5,396 9 0†	71 0 0‡	59,066 5 0	9,013	1,019	10,032
Total for 9 weeks ...	234,348	59,983 8 0	1,57,497 30	6,111 4 0	79 0 0	60,163 12 0	10,108	1,134	11,242
COMPARISON.									
Total for corresponding week of previous year ...	38,850‡	10,734 14 6	18,351 30	769 0 0	12 14 0	11,533 13 0	1,208	113	1,321
Per mile of railway corresponding week of previous year ...	.....	483 1 4	.....	35 2 10	0 9 3	516 13 5	.....	.....	.....
Total for corresponding 9 weeks of previous year ...	234,324	56,003 15 1	1,87,641 30	6,460 13 0	51 10 0	63,106 6 10	10,200	907	11,107

* The decrease is due to "Sivaratree mela" in the corresponding week of 1897.

† Audited No. of passengers 4,347 and Rs. 203

‡ Deducted Mds. 8,437

§ Do.

on account of difference between the approximate and audited figures for the week ended 22nd January 1898.

DELHI-UMBALLA-KALKA RAILWAY.

Approximate Return of Traffic for week ended 5th March 1898 on 162.24 miles open.

	COACHING TRAFFIC.		MERCHANDISE AND MINERAL TRAFFIC.		Other earnings (estimated).	Total earnings.	TRAFFIC TRAIN-MILES RUN.		
	Number of passengers.	Coaching receipts.	Weight carried.	Receipts.			Coaching.	Merchandise.	Total.
		Rs. A. P.	Mds. S.	Rs. A. P.	Rs. A. P.	Rs. A. P.			
Total traffic for the week ...	16,392	13,052 15 0	1,27,098 30	21,279 11 0	100 0 0	24,432 10 0	6,941	5,871	12,812
Or per mile of railway ...	.....	80 7 3	.....	131 2 7	0 9 11	212 3 9	.....	.....	.....
For previous 9 weeks of half-year.	351,568*	1,93,107 5 0*	8,26,091 10†	1,32,332 15 0†	667 0 0‡	3,26,027 4 0	64,424	33,802	98,226
Total for 9 weeks ...	367,960	2,06,010 4 0	9,53,780 0	1,53,032 10 0	767 0 0	3,60,459 14 0	71,445	39,733	111,178
COMPARISON.									
Total for corresponding week of previous year ...	14,128	12,450 0 6	72,806 20	10,766 13 0	53 4 0	23,270 1 6	6,315	4,104	10,419
Per mile of railway corresponding week of previous year ...	.....	77 9 4	.....	67 1 6	0 5 4	145 0 3	.....	.....	.....
Total for corresponding 9 weeks of previous year ...	144,619‡	1,11,239 9 2	8,27,883 20	95,467 2 0	538 4 3	2,06,314 15 5	61,537	38,877	95,414

* Added No. of passengers 11,302 and Rs. 8,188

† Do. Mds. 18,325

‡ Ditto

on account of difference between the approximate and audited figures for the week ended 22nd January 1898.

EASTERN BENGAL STATE RAILWAY.
(INCLUDING N. B., DACCA, K.-D., AND ASSAM-BENAR SECTIONS.)

Approximate Return of Traffic and Mileage for the week ended 5th March 1898 on 817 miles open.

	COACHING TRAFFIC.		MERCHANDISE AND MINERAL TRAFFIC.		Other earnings (including ferry).	Total earnings.	TRAFFIC TRAIN-MILES RUN.		
	Number of passengers.	Coaching receipts.	Weight carried.	Receipts.			Coaching.	Merchandise.	Total.
		Rs. A. P.	Mds. S.	Rs. A. P.	Rs. A. P.	Rs. A. P.			
Total traffic for the week ...	204,400	1,03,160 0 0	915,000 0	1,02,470 0 0	9,520 0 0	2,75,100 0 0	24,180	20,800	73,140
Or per mile of railway ...	250	126 0 0	1,121 0	100 0 0	0 0 0	329 0 0	...	...	...
For previous 8 weeks of half-year ...	1,612,820	8,40,970 0 0	77,45,070 0	14,45,880 0 0	1,26,740 0 0	24,15,590 0 0	204,670	250,432	615,102
Total for 9 weeks ...	1,817,220	9,44,130 0 0	86,63,970 0	16,08,350 0 0	1,36,260 0 0	26,88,780 0 0	229,850	389,302	689,242
COMPARISON.									
Total for corresponding period of previous year ...	198,877	1,00,747 0 0	8,69,117 0	1,14,908 0 0	7,318 0 0	2,29,063 0 0	23,864	24,063	67,683
Per mile of railway corresponding week of previous year ...	244	131 0 0	1,068 0	141 0 0	1 0 0	278 0 0	...	...	...
Total to corresponding date of previous year ...	1,673,125	10,23,235 0 0	76,94,923 0	10,73,688 0 0	1,40,752 0 0	22,32,005 0 0	204,991	205,736	600,727

* Excluding steamer earnings.

DACCA STATE RAILWAY.

Approximate Return of Traffic and Mileage for the week ended 5th March 1898 on 86 miles open.

	COACHING TRAFFIC.		MERCHANDISE AND MINERAL TRAFFIC.		Other earnings.	Total earnings.	TRAFFIC TRAIN-MILES RUN.		
	Number of passengers.	Coaching receipts.	Weight carried.	Receipts.			Coaching.	Merchandise.	Total.
		Rs. A. P.	Mds. S.	Rs. A. P.	Rs. A. P.	Rs. A. P.			
Total traffic for the week ...	25,200	10,800 0 0	48,470 0	5,720 0 0	100 0 0	16,190 0 0	3,080	1,300	4,470
Or per mile of railway ...	294	130 0 0	464 0	66 0 0	1 0 0	187 0 0	...	...	...
For previous 8 weeks of half-year ...	189,940	74,160 0 0	408,130 0	43,470 0 0	1,630 0 0	1,19,460 0 0	22,148	16,310	38,458
Total for 9 weeks ...	215,240	84,960 0 0	444,600 0	49,190 0 0	1,930 0 0	1,36,580 0 0	25,228	17,600	42,828
COMPARISON.									
Total for corresponding week of previous year ...	19,318	6,809 0 0	37,363 0	3,613 0 0	46 0 0	9,668 0 0	2,780	1,300	4,080
Per mile of railway corresponding week of previous year ...	225	78 0 0	440 0	42 0 0	1 0 0	115 0 0	...	...	...
Total to corresponding date of previous year ...	186,171	60,043 0 0	267,816 0	22,453 0 0	1,783 0 0	94,318 0 0	21,601	16,037	37,638

BENGAL CENTRAL RAILWAY COMPANY, LIMITED.

Approximate Return of Traffic and Mileage for the week ended 26th February 1898 on 125 miles open.

	COACHING TRAFFIC.		MERCHANDISE AND MINERAL TRAFFIC.		Other earnings.	Total earnings.	TRAFFIC TRAIN-MILES RUN.		
	Number of passengers.	Coaching receipts.	Weight carried.	Receipts.			Coaching.	Merchandise.	Total.
		Rs. A. P.	Mds. S.	Rs. A. P.	Rs. A. P.	Rs. A. P.			
Total traffic for the week ...	20,336	12,400 0 0	46,233 0	2,516 0 0	9,971 0 0	26,047 0 0	4,500	2,670	7,070
Or per mile of railway ...	163	100 0 0	370 0	20 0 0	80 0 0	208 0 0	...	...	...
For previous 7 weeks of half-year ...	205,801	98,498 0 0	4,23,225 0	31,717 0 0	11,615 0 0	1,41,627 0 0	29,408	20,128	49,536
Total for 8 weeks ...	226,137	110,898 0 0	4,74,457 0	35,233 0 0	21,586 0 0	1,67,774 0 0	33,908	22,798	56,706
COMPARISON.									
Total for corresponding week of previous year ...	20,040	12,914 0 0	60,484 0	2,730 0 0	111 0 0	16,764 0 0	3,000	2,073	5,073
Per mile of railway corresponding week of previous year ...	160	103 0 0	484 0	22 0 0	1 0 0	134 0 0	...	...	...
Total to corresponding date of previous year ...	200,119	100,728 0 0	6,56,218 0	35,212 0 0	1,190 0 0	1,46,226 0 0	33,908	20,007	53,915



SUPPLEMENT TO The Calcutta Gazette.

WEDNESDAY, MARCH 23, 1898.

OFFICIAL PAPERS.

[Non-Subscribers to the GAZETTE may receive the SUPPLEMENT separately on payment of Six Rupees per annum if delivered in Calcutta, or Twelve Rupees if sent by Post.]

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AMENDMENT OF THE CALCUTTA MUNICIPAL CONSOLIDATION ACT, 1888.

No. 1635M.—The 17th March 1898.—The following correspondence is published for general information.

H. H. RISLEY,
Secy. to the Govt. of Bengal.

No. 1233M., dated Calcutta, the 7th March 1898.

From—H. H. RISLEY, Esq., C.I.E., Secy. to the Govt. of Bengal, Municipal Dept.,
To—The Secretary to the Government of India, Home Department.

In continuation of previous confidential correspondence regarding the amendment of the Calcutta Municipal Consolidation Act of 1888, I am directed to submit, for the formal sanction of the Government of India, a Bill to amend that Act which the Lieutenant-Governor proposes to introduce into the Bengal Council at the earliest possible date.

2. In explanation of the changes which the Bill will effect in the relative powers and duties of the Corporation, the General Committee and the Chairman,

I am to submit copies of the papers contained in the appendix to this letter, and to say that, in view of the facts therein stated, the Lieutenant-Governor reluctantly came to the conclusion that the state of Calcutta from a sanitary point of view was so appallingly bad as to call for the early and effective intervention of Government, and that the first step necessary to bring about adequate reform was to revise the Act throughout, so as in the first place to provide the town with a responsible municipal executive, and in the next place to furnish this executive with a law adequate to the sanitary requirements of the present day and the condition of Calcutta as it now is.

3. On the 9th October 1896 it was reported that a case of bubonic plague had occurred in Howrah, and by a Resolution of the 10th October the Lieutenant-Governor

Appendix No. 1.
appointed the following gentlemen to form a Medical Board for the purpose of determining the action to be taken by all executive authorities, whether official or municipal, with the object of preventing and checking the plague throughout Bengal:—

Hon'ble H. H. Risley, C.I.E.	President.
" P. Playfair, C.I.E.	} Members.
" J. G. H. Glasse, C.I.E.	...	...
Surgeon-Colonel Ross	...	...
Surgeon-Lieutenant-Colonel D. D. Cunningham, C.I.E., F.R.S.	...	...
Surgeon-Captain Dyson	...	...
Dr. Mohendra Lal Sarkar, C.I.E.	} Secretary.
Surgeon-Captain Robson Scott	...	...

It was laid down in the Resolution that the orders issued by the Board should be deemed to be the orders of Government, and be carried out with all possible despatch by all executive authorities. In the exercise of this power

the Board, on the 22nd October, deputed five Sanitary officers,* whose services had meanwhile been placed at their disposal, to make a sanitary survey of the Town proper of Calcutta

with reference to certain main points, and to report the results. Similar instructions were given to Surgeon-Captain Pilgrim, then Civil Surgeon of the 24-Parganas, in respect of the area added to Calcutta by Bengal Act II of 1888. The reports

submitted by these officers* disclosed a state of things which may be summarised as follows:—

I.—Overcrowded and badly built houses.—In many parts of the town and suburbs they found that both pukka houses and bustee huts were dangerously overcrowded, and were built in a manner which rendered proper ventilation and efficient conservancy almost impossible.

II.—Defects of public latrines.—The public latrines and urinals were in many cases faulty in construction; they were imperfectly cleaned and their number was insufficient to justify even a limited application of the penal provisions of the law in regard to nuisances.

III.—Defects of private latrines.—The private latrines were in many cases so constructed that they could not be properly cleaned, nor could the conservancy officers get access to them; and consequently many of them were choked with accumulations of filth.

IV.—State of house-drains and down-pipes.—The house-drains and down-pipes were in many cases broken, choked, and out of repair.

V.—State of surface drains.—The surface drains were blocked with foul matter, latrines were allowed to discharge into them, and the drains themselves were often used as latrines.

VI.—Neglect of road scavenging.—The scavenging of the roads was imperfectly carried out; the staff was inadequate for the work; and the subsoil had become dangerously polluted.

VII.—State of compounds and courtyards.—The condition of the compounds and courtyards of houses was in many cases extremely filthy.

VIII.—Pollution of wells.—Wells in courtyards were contaminated by the percolation of sewage impurities from the soil.

IX.—State of cowsheds and stables.—Cowsheds and stables were situated in thickly populated places; their construction was faulty; they were greatly overcrowded, and their flooring was soaked with sewage which polluted the wells on the premises.

X.—State of hackney carriage stands.—The number of hackney carriage stands was wholly insufficient to meet the current requirements of the town, and they were imperfectly flushed and cleansed.

XI.—Condition of bustees.—Most bustees were badly drained and imperfectly ventilated; the huts were too close together; the latrine arrangements led to the pollution of the soil; the roads and lanes were too narrow, and conservancy was imperfectly carried out.

4. The description given by the Sanitary officers of the condition of parts of Calcutta was borne out by the personal observation of the members of the Board, all of whom, with the exception of the native member, who was in bad health, visited the streets and houses, the conservancy of which had been most conspicuously neglected. Their accounts were also confirmed in the fullest detail and supplemented in innumerable similar instances by the reports and evidence of Dr. Banks, who had large experience of practical sanitation as Civil Medical Officer of Puri, and was for this reason selected by the Lieutenant-Governor for the post of the Chief Superintendent of Conservancy in Calcutta, a temporary appointment sanctioned by the Commissioners early in October 1896. Dr. Banks's

Appendix No. 5.

during which time he was constantly engaged in supervising the conservancy arrangements of the entire town and in directing the work of the extra conservancy staff appointed† by the Commissioners on 25th September 1896 for the purpose of cleaning up the town in view of a possible outbreak of plague, and subsequently expanded,‡ on the 25th January 1897. Although

- † Extra staff first sanctioned—
- 1 Superintendent.
- 1 Inspector.
- 1 Sub-Inspector.
- 200 Coolies.
- 60 Hired carts.
- ‡ Additional staff subsequently sanctioned—
- 1 Temporary Superintendent.
- 12 Sub-Inspectors.
- 1,300 Coolies.
- 19 Surface carts.
- 90 Bullock carts.

reports cover the period from the 19th October 1896 to the 30th March 1897, necessarily of a somewhat fragmentary character, they possess a special

value as recording the daily observations of an experienced Sanitary officer who was occupied for about six months exclusively in looking after the daily work of conservancy, and they may be accepted as giving an absolutely truthful picture of the actual sanitary condition of the City of Calcutta during the period to which they relate. I am to invite special attention to the evidence given by Dr. Banks before the Medical Board and to his reports of the 26th and 30th March 1897, which sum up the chief results of his enquiries. During the period of Dr. Banks's deputation the extra staff, which worked from 4 A.M. daily under his personal orders, removed 10,722 tons of neglected filth, not including enormous quantities of night-soil removed to

MEERS OF 80 TOLAHS.

RAJRA OR CUMBU. (<i>Pennisetum typhoid- eum.</i>)			MARUA OR RAGL. (<i>Eleusine Corocana</i>)		
Present return.	Next preceding re- turn.	Corresponding re- turn of last year.	Present return.	Next preceding re- turn.	Corresponding re- turn of last year.

R. Ch. S. Ch. S. Ch. S. Ch. S. Ch. S. Ch.

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PRICES-CURRENT (retail) of

Number.	DISTRICTS.	WHEAT.			BARLEY.			RICE, BEST SORT.		
		Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.

BENGAL.

Burdwan Division.	Number.	District.	WHEAT.			BARLEY.			RICE, BEST SORT.		
			Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.
Burdwan Division.	1	Burdwan ...	...	8 8	9 8	...	...	...	11 4	11 4	...
	2	Birbhum ...	8 0	8 4	8 0	...	...	...	9 0	9 0	...
	3	Bankura ...	9 0	9 0	9 0	...	...	...	10 0	10 0	...
	4	Midnapore ...	8 0	8 0	8 0	...	...	...	10 0	10 0	...
	5	Hooghly ...	10 0	10 0	9 0	...	...	...	7 8	7 8	...
	6	Howrah ...	...	...	...	...	...	...	10 0	9 8	8 9

Presidency Division.	Number.	District.	WHEAT.			BARLEY.			RICE, BEST SORT.		
			Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.
Presidency Division.	7	24-Parganas ...	...	...	...	...	...	...	8 14	8 14	...
	8	Calcutta ...	10 0	8 10	8 0	12 4	10 10	11 13	6 10	6 10	...
	9	Nadia ...	9 2	8 0	9 5	...	...	...	5 15	5 15	...
	10	Murshidabad ...	12 0	10 0	10 0	...	16 0	10 0	10 12	10 8	...
	11	Jessore ...	8 0	8 0	7 0	10 0	10 0	10 0	10 0	10 0	...
	12	Khulna ...	...	...	...	...	...	...	12 0	12 12	...

Rajshahi Division.	Number.	District.	WHEAT.			BARLEY.			RICE, BEST SORT.		
			Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.
Rajshahi Division.	13	Rajshahi ...	new 18 8	8 4	10 2	new 18 12	...	18 8	8 0	6 0	...
	14	Dinajpur ...	9 9	8 7	8 0	8 0	8 0	...	10 8	10 8	...
	15	Jalpaiguri ...	8 4	8 0	8 8	...	...	...	5 4	5 4	...
	16	Darjeeling ...	8 0	8 0	6 0	8 0	7 0	8 0	5 8	5 0	...
	17	Rangpur ...	7 0	7 0	7 0	...	...	...	8 0	8 0	...
	18	Bogra ...	7 8	7 8	7 8	...	...	...	8 4	8 4	...
Dacca Division.	19	Pabna ...	8 0	8 0	9 0	12 0	12 0	15 0	6 0	6 0	...
	20	Dacca ...	8 0	8 0	8 4	new 26 0	13 4	...	10 0	10 0	...
	21	Mymensingh ...	8 0	8 0	7 0	...	...	...	7 8	7 8	...
	22	Faridpur ...	...	...	...	...	...	...	5 8	5 8	...
	23	Backergunge ...	...	...	...	...	...	...	11 8	11 12	...

- A. In the subdivisions the retail prices of salt per rupee are:—Kaina 10 seers Rangpur 10½ seers.
 B. At Rampur Hat the retail price of salt is 11½ seers per rupee.
 C. At Vishnupur the retail price of salt is 9½ seers per rupee.
 D. In the subdivisions the retail prices of salt per rupee are:—Contai 9 seers; Tarai 10 seers.
 E. In the subdivisions the retail prices of salt per rupee are:—Serampore 10½ seers; At Ulubaria the retail price of salt is 10 seers 10½ chitaks per rupee.
 F. In the marts in the interior of the district the retail prices of salt per rupee are:—seers; Magrahat 9½ seers.
 G. In the subdivisions the retail prices of salt per rupee are:—Kushtia (Bahadur) Mohorpur 10 seers (crushed); Ranghat 10 seers (crushed).
 H. In the subdivisions the retail prices of salt per rupee are:—Lalbagh 11 seers (kai).
 I. In the subdivisions the retail prices of salt per rupee are:—Jhoulia 9 seers 1 chit.
 J. Bongaon returns not received.

KANKONI OR KARUN, ITALIAN MILLET. (Setaria Italica.)			GRAM, CHANA, CHHOLA, KADALAY, OR SUNAGA. (Cicer aricutum.)		
Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.

Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.
...	12 0	8 8	12 0
...	10 0	9 0	9 12
...	11 0	11 0	10 0
...	8 0	8 0	10 0
...	8 0	8 0	8 0
...	9 0	8 8	9 8 to 11 0

Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.
...	8 14	8 14	9 0
10 0	10 0	8 0	9 8	8 8	10 10
...	12 5	9 9	12 9
...	16 0	18 0	13 8
...	8 0	8 0	10 0
...	7 0	7 0	9 0

Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.
...	New 12 0	6 12	12 12
...	8 0	8 0	9 9 3/4
...	9 0	9 0	10 0
...	7 0	7 8	7 0
...	8 0	8 0	9 1
...	7 8	7 0 1/2	8 1
...	8 0	8 0	10 0

Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.
...	10 0	10 0	10 0
...	8 0	8 0	8 0
...	5 4	5 8	...
...	7 8	7 4	8 8

quarters Station Bazars of the Districts of Bengal on the 28th February 1898.

INDIAN-CORN OR MAIZE. (Zea mays.)												ARHAR OR TUR, CADJAN PEA. (Cajanus Indicus.)												SALT.			SALT.			DISTRICTS.	Number.
Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.											
BENGAL.																															
A.	Ch.	S.	Ch.	S.	Ch.	S.	Ch.	S.	Ch.	S.	Ch.	S.	Ch.	S.	Ch.	S.	Ch.	S.	Ch.	S.											
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- K. In the subdivisions the retail prices of salt per rupee are :—Bagerhat 9 seers ; and Satkhira 9½ seers.
 L. In the subdivisions the retail prices of salt per rupee are :—Nauagao 9½ seers (panga), Nator 9 seers (panga).
 M. At Siliguri and Kurseong the retail price of salt is 8 seers per rupee.
 N. In the subdivisions the retail prices of salt per rupee are :—Gaibanda 10 seers ; Kurigram 8 seers ; Nilphamari 9 seers.
 O. At Sirajganj the retail price of salt is 10 seers per rupee.
 P. In the marts in the interior of the district the retail prices of salt per rupee are :—Madanganj 9 seers 2 chittaks, Manikganj 9 seers, Munshirhat 8 seers 14 chittaks, Mirkadim 8 seers 14 chittaks.
 Q. In the subdivisions the retail prices of salt per rupee are :—Kishorganj 9 seers 6 chittaks, Jamalpur 9 seers 7 chittaks, Kagnari 8 seers, Netrokona 8 seers.
 R. In the subdivisions the retail prices of salt per rupee are :—Goalundo 10 seers, Madaripur 10½ seers (Crushed).
 S. In the subdivisions the retail prices of salt per rupee are :—Pirojpur 8 seers, Patuakhali 9 seers, Bhola 8 seers.

PRICES-CURRENT (retail) of Food-grains and Salt in the Head-quarter

Number.		DISTRICTS.	QUANTITIES PER RUPEE IN																	
			WHEAT.			BARLEY.			RICE, BEST SORT.			RICE, COMMON.			JOWAR OR GHOLU (Sorghum Vulgar.).					
			Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.			
BENGAL—concluded.																				
CHITTAGONG DIVISION.	24	Tippera	...	...	...	...	...	...	10 10	10 10	10 0	11 14	12 4	11 2	...	...	...
	25	Noakhali	...	...	...	...	...	...	10 8	11 0	9 0	11 0	12 8	10 8	...	...	...
	26	Chittagong	...	...	...	...	...	...	11 0	11 4	6 4	12 4	12 4	9 8	...	...	...
BIHAR.																				
PATNA DIVISION.	27	Patna	...	12 0	13 0	10 0	16 8	18 0	12 0	12 0	13 0	9 8	14 8	15 0	10 0	19 0	19 0	12 0		
	28	Gaya	...	10 0	10 8	8 0	14 0	14 0	11 0	6	7 4	8 8	14 0	14 4	9 4	...	17 8	11 0		
	29	Shahabad	...	{ 10 0 & 11 0	{ 10 0 & 10 8	{ 8 8 & 9 0	16 0	16 0	...	7 0	7 0	{ 8 12 & 9 0	{ 13 0 & 13 8	{ 9 8 & 9 12	...	...	...
	30	Saran	...	11 8	11 0	8 8	...	16 0	12 0	6 8	6 8	7 0	14 4	14 8	10 0	...	...	...
	31	Champaran	...	11 0	10 0	7 12	...	...	...	7 0	6 8	6 4	14 8	15 0	9 4	...	...	...
	32	Muzaffarpur	...	10 0	11 0	8 0	20 0	20 0	12 0	7 0	6 0	7 0	14 2	14 0	8 8	...	...	...
	33	Darbhanga	...	9 8	10 0	8 0	11 0	11 8	11 0	7 0	8 0	8 0	13 8	13 8	9 0	...	...	...
BAGALPUR DIVISION.	34	Monghyr	...	11 2	10 12	8 8	14 11	14 11	11 8	5 4	5 12	6 0	12 9	12 9	9 0	...	...	...
	35	Bhagalpur	...	10 12	11 6	8 14	14 0	11 6	12 10	11 6	11 6	8 14	14 8	15 2	10 2	...	...	...
	36	Purnea (Kasba)	...	8 8	...	9 8	...	...	...	13 0	13 8	9 0	16 0	16 8	10 0	...	...	...
	37	Malda (English Bazar)	...	8 0	...	...	...	...	...	...	...	8 0	13 0	13 0	9 8	...	...	...
	38	Bonthal Pargana.	...	9 0	8 4	7 12	8 8	9 0	...	9 0	10 0	8 0	13 0	14 0	10 4	...	...	...
ORISSA.																				
ODISHA DIVISION.	39	Cuttack	...	8 9	7 14	7 4	...	...	...	10 8	10 8	8 9	15 12	15 12	11 13	...	...	...
	40	Balasore	...	16 0	10 10	10 0	10 0	10 0	9 8	13 8	13 0	{ 8 0 to 10 0	16 0	15 0	12 0	...	...	...
	41	Puri	...	7 7	7 7	6 9	...	...	...	6 9	6 9	7 14	17 2	15 12	11 13	...	...	...
CHOTA NAGPUR.																				
CHOTA NAGPUR DIVISION.	42	Hazaribagh	...	9 0	9 0	7 0	10 0	10 0	10 0	6 0	6 0	6 8	13 0	13 0	9 0	...	...	...
	43	Lohardaga	...	{ 6 0 to 8 8	{ 6 0 to 8 8	{ 5 12 to 7 12	...	...	...	10 0	10 0	{ 7 0 to 7 8	13 0	{ 12 0 to 13 0	{ 8 8 to 9 4	...	...	...
	44	Palamau	...	9 11	9 9	8 7	...	...	10 2	11 13	11 4	7 5	12 6	12 6	8 7	...	...	...
	45	Manbhum	...	9 0	10 0	9 8	12 0	12 0	...	9 0	9 0	8 8	16 0	16 0	10 8	...	...	...
46	Singhbhum	...	8 0	8 0	8 0	...	...	...	14 0	14 0	9 0	16 0	16 0	11 0	...	...	...

T. In the subdivisions the retail prices of salt per rupee are :—Chandpur 9 seers ; Brahmanbaria 9 seers 2 chittacks,
 U. At Feni HAT the retail price of salt is 8 seers per rupee.
 V. At Cox's Bazar the retail price of salt is 8½ seers per rupee.
 W. In the subdivisions the retail prices of salt per rupee are :—Bihar 10 seers, Dinapore 10 seers 2 chittack, Barh 11 seers.
 X. In the subdivisions the retail prices of salt per rupee are :—Nuwada 9 seers, Aurangabad 9½ seers.
 Y. In the subdivisions the retail prices of salt per rupee are :—Buxar 11 seers, Bhabua 9½ seers, Sasaram 10½ seers.
 Z. In the subdivisions the retail prices of salt per rupee are :—Siwan 11½ seers, Gopalganj (Mirganj) 12 seers.
 a. At Bettiah the retail price of salt is 10 seers per rupee.
 b. In the subdivisions the retail prices of salt per rupee are :—Sitamarhi 10 seers and Hajipur 9½ seers.
 c. In the subdivisions the retail prices of salt per rupee are :—Samastipur 10 seers, Madhubani 10½ seers.

CALCUTTA,

The 22nd February 1898.

BEERS OF 80 TOLARS.

BAJRA OR CUMBU. (<i>Pennisetum typhoides</i> L. cum.)	MARUA OR RAGI. (<i>Eleusine Coracana</i> .)
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Present return.	
Next preceding re- turn.	
Corresponding re- turn of last year.	
Present return	
Next preceding re- turn.	
Corresponding re- turn of last year.	

S	Ch.	S	Ch.	S	Ch.	S	Ch.
001		001		000		000	000
000		000		001		000	000
000		000		000		000	000

[illegible]

006	007	008	009	010	011
012	013	014	015	016	017
018	019	020	021	022	023
024	025	026	027	028	029
030	031	032	033	034	035
036	037	038	039	040	041
042	043	044	045	046	047
048	049	050	051	052	053
054	055	056	057	058	059
060	061	062	063	064	065
066	067	068	069	070	071
072	073	074	075	076	077
078	079	080	081	082	083
084	085	086	087	088	089
090	091	092	093	094	095
096	097	098	099	100	101
102	103	104	105	106	107
108	109	110	111	112	113
114	115	116	117	118	119
120	121	122	123	124	125
126	127	128	129	130	131
132	133	134	135	136	137
138	139	140	141	142	143
144	145	146	147	148	149
150	151	152	153	154	155
156	157	158	159	160	161
162	163	164	165	166	167
168	169	170	171	172	173
174	175	176	177	178	179
180	181	182	183	184	185
186	187	188	189	190	191
192	193	194	195	196	197
198	199	200	201	202	203
204	205	206	207	208	209
210	211	212	213	214	215
216	217	218	219	220	221
222	223	224	225	226	227
228	229	230	231	232	233
234	235	236	237	238	239
240	241	242	243	244	245
246	247	248	249	250	251
252	253	254	255	256	257
258	259	260	261	262	263
264	265	266	267	268	269
270	271	272	273	274	275
276	277	278	279	280	281
282	283	284	285	286	287
288	289	290	291	292	293
294	295	296	297	298	299
300	301	302	303	304	305
306	307	308	309	310	311
312	313	314	315	316	317
318	319	320	321	322	323
324	325	326	327	328	329
330	331	332	333	334	335
336	337	338	339	340	341
342	343	344	345	346	347
348	349	350	351	352	353
354	355	356	357	358	359
360	361	362	363	364	365
366	367	368	369	370	371
372	373	374	375	376	377
378	379	380	381	382	383
384	385	386	387	388	389
390	391	392	393	394	395
396	397	398	399	400	401
402	403	404	405	406	407
408	409	410	411	412	413
414	415	416	417	418	419
420	421	422	423	424	425
426	427	428	429	430	431
432	433	434	435	436	437
438	439	440	441	442	443
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KANONI OR KAKEN ITALIAN MILLET. (<i>Setaria italica</i> .)						GRAM, CHANA CHHOLA, KADALAY OR SUNAGA. (<i>Cicer arietinum</i> .)					
Present return.	Next preceding re- turn.	re- turn of last year.	Present return.	Next preceding re- turn.	re- turn of last year.	Present return.	Next preceding re- turn.	re- turn of last year.	Present return.	Next preceding re- turn.	re- turn of last year.
S. Ch.	S. Ch.	S. Ch.	S. Ch.	S. Ch.	S. Ch.	S. Ch.	S. Ch.	S. Ch.	S. Ch.	S. Ch.	S. Ch.
...
...	7	8	7	8	8	0	...	...	...
...	8	0	8	0	8	0	...	...	...
13	0	13	0	14	0	10	8	11	0	12	8
11	0	9	4	13	0	9	8	9	8	10	12
...	{ 11 0 10 4 11 0 & & }			...	...	...	...	...	...
10	0	10	0	11	0	11	4	10	0	12	0
...	10	0	10	0	10	4	...	...	...
...	10	0	10	0	11	0	...	...	...
...	8	0	8	0	10	0	...	...	...
10	8	10	8	...	10	8	8	0	12	8	...
...	9	8	8	14	11	8	...	...	...
...	13	0	13	0	10	0	...	...	...
...	...	8	8	8	0	8	0	9	0	...	...
...	8	8	8	8	10	0	...	...	...
Biri or kahai.						Biri or kahai.					
...	15	2	13	13	14	7	...	...	...
...	{ 8 8 8 0 9 0 Biri or kahai }		
...	12	0	11	0	13	0
...	13	2	13	2	11	13
...	10	0	10	0	9	4
...	{ 8 8 8 0 8 0 to to }		
...	13	8	9	0	9	0
...	11	0	8	0	10	0
...	8	0	8	0	8	0

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1997, 1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021, 2022, 2023, 2024, 2025, 2026, 2027, 2028, 2029, 2030, 2031, 2032, 2033, 2034, 2035, 2036, 2037, 2038, 2039, 2040, 2041, 2042, 2043, 2044, 2045, 2046, 2047, 2048, 2049, 2050, 2051, 2052, 2053, 2054, 2055, 2056, 2057, 2058, 2059, 2060, 2061, 2062, 2063, 2064, 2065, 2066, 2067, 2068, 2069, 2070, 2071, 2072, 2073, 2074, 2075, 2076, 2077, 2078, 2079, 2080, 2081, 2082, 2083, 2084, 2085, 2086, 2087, 2088, 2089, 2090, 2091, 2092, 2093, 2094, 2095, 2096, 2097, 2098, 2099, 2100, 2101, 2102, 2103, 2104, 2105, 2106, 2107, 2108, 2109, 2110, 2111, 2112, 2113, 2114, 2115, 2116, 2117, 2118, 2119, 2120, 2121, 2122, 2123, 2124, 2125, 2126, 2127, 2128, 2129, 2130, 2131, 2132, 2133, 2134, 2135, 2136, 2137, 2138, 2139, 2140, 2141, 2142, 2143, 2144, 2145, 2146, 2147, 2148, 2149, 2150, 2151, 2152, 2153, 2154, 2155, 2156, 2157, 2158, 2159, 2160, 2161, 2162, 2163, 2164, 2165, 2166, 2167, 2168, 2169, 2170, 2171, 2172, 2173, 2174, 2175, 2176, 2177, 2178, 2179, 2180, 2181, 2182, 2183, 2184, 2185, 2186, 2187, 2188, 2189, 2190, 2191, 2192, 2193, 2194, 2195, 2196, 2197, 2198, 2199, 2200, 2201, 2202, 2203, 2204, 2205, 2206, 2207, 2208, 2209, 2210, 2211, 2212, 2213, 2214, 2215, 2216, 2217, 2218, 2219, 2220, 2221, 2222, 2223, 2224, 2225, 2226, 2227, 2228, 2229, 2230, 2231, 2232, 2233, 2234, 2235, 2236, 2237, 2238, 2239, 2240, 2241, 2242, 2243, 2244, 2245, 2246, 2247, 2248, 2249, 2250, 2251, 2252, 2253, 2254, 2255, 2256, 2257, 2258, 2259, 2260, 2261, 2262, 2263, 2264, 2265, 2266, 2267, 2268, 2269, 2270, 2271, 2272, 2273, 2274, 2275, 2276, 2277, 2278, 2279, 2280, 2281, 2282, 2283, 2284, 2285, 2286, 2287, 2288, 2289, 2290, 2291, 2292, 2293, 2294, 2295, 2296, 2297, 2298, 2299, 2300, 2301, 2302, 2303, 2304, 2305, 2306, 2307, 2308, 2309, 2310, 2311, 2312, 2313, 2314, 2315, 2316, 2317, 2318, 2319, 2320, 2321, 2322, 2323, 2324, 2325, 2326, 2327, 2328, 2329, 2330, 2331, 2332, 2333, 2334, 2335, 2336, 2337, 2338, 2339, 2340, 2341, 2342, 2343, 2344, 2345, 2346, 2347, 2348, 2349, 2350, 2351, 2352, 2353, 2354, 2355, 2356, 2357, 2358, 2359, 2360, 2361, 2362, 2363, 2364, 2365, 2366, 2367, 2368, 2369, 2370, 2371, 2372, 2373, 2374, 2375, 2376, 2377, 2378, 2379, 2380, 2381, 2382, 2383, 2384, 2385, 2386, 2387, 2388, 2389, 2390, 2391, 2392, 2393, 2394, 2395, 2396, 2397, 2398, 2399, 2400, 2401, 2402, 2403, 2404, 2405, 2406, 2407, 2408, 2409, 2410, 2411, 2412, 2413, 2414, 2415, 2416, 2417, 2418, 2419, 2420, 2421, 2422, 2423, 2424, 2425, 2426, 2427, 2428, 2429, 2430, 2431, 2432, 2433, 2434, 2435, 2436, 2437, 2438, 2439, 2440, 2441, 2442, 2443, 2444, 2445, 2446, 2447, 2448, 2449, 2450, 2451, 2452, 2453, 2454, 2455, 2456, 2457, 2458, 2459, 2460, 2461, 2462, 2463, 2464, 2465, 2466, 2467, 2468, 2469, 2470, 2471, 2472, 2473, 2474, 2475, 2476, 2477, 2478, 2479, 2480, 2481, 2482, 2483, 2484, 2485, 2486, 2487, 2488, 2489, 2490, 2491, 2492, 2493, 2494, 2495, 2496, 2497, 2498, 2499, 2500, 2501, 2502, 2503, 2504, 2505, 2506, 2507, 2508, 2509, 2510, 2511, 2512, 2513, 2514, 2515, 2516, 2517, 2518, 2519, 2520, 2521, 2522, 2523, 2524, 2525, 2526, 2527, 2528, 2529, 2530, 2531, 2532, 2533, 2534, 2535, 2536, 2537, 2538, 2539, 2540, 2541, 2542, 2543, 2544, 2545, 2546, 2547, 2548, 2549, 2550, 2551, 2552, 2553, 2554, 2555, 2556, 2557, 2558, 2559, 2560, 2561, 2562, 2563, 2564, 2565, 2566, 2567, 2568, 2569, 2570, 2571, 2572, 2573, 2574, 2575, 2576, 2577, 2578, 2579, 2580, 2581, 2582, 2583, 2584, 2585, 2586, 2587, 2588, 2589, 2590, 2591, 2592, 2593, 2594, 2595, 2596, 2597, 2598, 2599, 2600, 2601, 2602, 2603, 2604, 2605, 2606, 2607, 2608, 2609, 2610, 2611, 2612, 2613, 2614, 2615, 2616, 2617, 2618, 2619, 2620, 2621, 2622, 2623, 2624, 2625, 2626, 2627, 2628, 2629, 2630, 2631, 2632, 2633, 2634, 2635, 2636, 2637, 2638, 2639, 2640, 2641, 2642, 2643, 2644, 2645, 2646, 2647, 2648, 2649, 2650, 2651, 2652, 2653, 2654, 2655, 2656, 2657, 2658, 2659, 2660, 2661, 2662, 2663, 2664, 2665, 2666, 2667, 2668, 2669, 2670, 2671, 2672, 2673, 2674, 2675, 2676, 2677, 2678, 26

PRICES-CURRENT (wholesale) of Food-grains, Firewood, &c.

Number.	MART.	RICE (BEST SORT).			COMMON RICE (<i>meta chauli</i>).			WHEAT (<i>Triticum sativum</i>).			BARLEY (<i>Hordeum vulgare</i>).		
		Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.
		Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.
1	2	3	4	5	6	7	8	9	10	11	12	13	14
1	Calcutta ...	5 12 0	5 12 0	6 0 0	4 8 0	4 8 0	4 12 0	3 12 0	4 3 0	4 12 0	2 10 0	3 0 0	3 4 1
2	Burdwan ...	3 6 0	3 6 0	4 0 0	2 14 0	2 14 6	3 8 0	...	4 8 0	4 2 0	...	...	...
3	Midnapore ...	3 10 0	3 10 0	4 6 0	2 12 0	3 0 0	3 8 0	...	...	...	...	...	...
4	Pabna ...	6 10 0	6 10 0	6 10 0	3 5 3	3 6 6	3 12 0	5 0 0	5 0 0	4 6 0	...	...	...
5	Rangpur ...	5 0 0	4 12 0	4 13 0	3 2 0	3 0 0	3 14 0	5 0 0	5 0 0	5 8 0	...	...	...
6	Dacca ...	3 13 0	3 15 0	4 4 0	3 4 0	3 4 0	4 0 0	4 14 0	4 14 0	4 13 0	1 8 0	3 0 0	...
7	Chittagong ...	3 10 0	3 8 0	6 0 0	3 4 0	3 4 0	4 0 0	...	...	...	...	...	...
8	Patna ...	3 4 0	3 0 0	4 2 0	2 9 0	2 9 6	3 12 0	3 4 0	3 0 0	3 15 0	2 5 0	2 3 0	3 4 1
9	Munaffarpur ...	5 11 6	6 10 6	5 11 6	2 12 0	2 13 8	4 4 0	4 0 0	3 10 0	5 5 0	2 0 0	2 0 0	3 10 1
10	Bhagalpur ...	3 7 0	3 8 0	4 8 0	2 10 6	2 10 0	3 15 0	3 10 0	3 8 0	4 8 0	2 12 0	3 3 0	3 3 1
11	Cuttack ...	3 6 6	3 6 6	4 5 6	2 7 0	2 7 0	3 3 3	4 8 6	4 8 6	5 3 6	...	...	...
12	Ranchi ...	4 0 0	4 0 0	{ 5 5 0 to 5 12 0 }	3 1 0	{ 3 1 8 to 3 5 0 }	{ 4 5 0 to 4 11 0 }	{ 4 11 0 to 6 10 6 }	{ 4 11 0 to 6 10 6 }	{ 5 2 6 to 7 9 9 }	...	...	...

CALCUTTA,
The 8th March 1898.

JUAB OR CHOLUM (<i>Sorghum vulgare</i>).			BAJRA OR CUMBU (<i>Pennisetum typhoides</i>).			MARUA OR RAGI (<i>Eleusine coracana</i>).			GRAM, CHANA, CHOLA, KADALAY, OR SUNAGA (<i>Cicer arietinum</i>).		
Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.
15	16	17	18	19	20	21	22	23	24	25	26
Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.
2 0	2 8 0	3 4 0	2 4 0	2 8 0	4 8 0	...	...	...	3 12 0	4 6 0	3 8 0
...	3 4 0	4 8 0	3 6 0
...
...	5 0 0	5 0 0	4 0 0
...	4 8 0	4 8 0	3 15 0
...	3 14 0	3 14 0	4 0 0
...	5 0 0	5 0 0	4 12 0
0 0	2 0 0	3 0 0	...	...	...	...	...	...	3 9 0	3 9 0	3 0 0
...	1 9 6	1 9 6	...	...	...	...
...	4 2 0	4 8 0	3 8 3
...	Biri or kalal.		2 10 3
...	2 8 6	2 12 6	...
...	4 7 0	4 11 0	4 11 0
...	to	to	to
...	4 11 0	5 0 0	5 0 0

PRICES PER MAUND

INDIAN-CORN OR MAIZE (Zea mays).			ARHAR DAL OR THUR— CADJAN PEA (Cajanus indicus).			LINSSEED.			MUSTARD AND RAPESEED.		
Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.
27	28	29	30	31	32	33	34	35	36	37	38
Ra. A. P.	Ra. A. P.	Ra. A. P.	Ra. A. P.	Ra. A. P.	Ra. A. P.	Ra. A. P.	Ra. A. P.	Ra. A. P.	Ra. A. P.	Ra. A. P.	Ra. A.
2 2 0	2 9 0	4 0 0	3 8 0	3 12 0	3 0 0	4 0 0	4 8 0	4 8 0	3 12 0	3 6 0	4 8
...	...	...	3 5 0	4 0 0	4 0 0	...	...	...	3 13 0	4 0 0	4 0
...	...	...	...	...	...	3 14 0	3 18 0	4 0 0	Black mustard. 4 0 0 4 0 0 4 8		
...	...	...	...	...	...	...	...	...	Rape seed. 3 4 0 3 5 0 5 4		
...	...	...	2 0 9	2 0 9	Pea. Dal. 2 6 0 4 0 0	3 8 0	3 8 0	4 6 0	3 6 0	3 8 0	3 14
2 8 0	2 4 0	4 13 0	6 8 0	7 0 0	5 11 0	10 0 0	10 0 0	11 0 0	4 12 0	4 12 0	3 4
...	...	...	4 0 0	4 8 0	4 0 0	...	...	...	...	...	...
...	...	...	...	...	...	...	...	...	4 4 0	4 12 0	5 8
1 13 6	1 13 6	3 5 0	2 2 0	2 10 6	2 10 6	3 4 0	3 4 0	3 0 0	3 8 0	3 0 0	3 8
2 0 0	2 0 0	3 13 0	5 0 0	5 0 0	5 0 0	...	...	...	...	...	...
1 12 6	1 14 0	3 8 3	2 7 0	2 10 0	3 8 3	3 12 0	3 12 0	3 12 0	4 0 0	4 8 0	3 10
...	...	...	2 7 0	2 7 0	2 12 3	...	...	...	4 5 6	4 5 6	3 13
{ ... }			{ 4 11. 0 to 5 5 6 }			5 11 0	6 2 0	4 0 0	4 0 0	5 0 0	{ 2 13 9 to 3 1 0 }

40 STANDARD SEERS.

TIL OR JINJILI SEED.			SUGAR (RAW).			COTTON, CLEANED.			JUTE.		
Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.
39	40	41	42	43	44	45	46	47	48	49	50
Ra. A. P.	Ra. A. P.	Ra. A. P.	Ra. A. P.	Ra. A. P.	Ra. A. P.	Ra. A. P.	Ra. A. P.	Ra. A. P.	Ra. A. P.	Ra. A. P.	Ra. A. P.
4 0 0	4 6 0	4 4 0	4 9 0	4 9 0	5 0 0	17 0 0	17 8 0	17 8 0	4 8 0	4 12 0	5 0 0
...	...	...	5 0 0	5 4 0	4 0 0	16 0 0	17 8 0	17 0 0	...	...	...
...	...	...	5 0 0	4 12 0	4 4 0	17 0 0	17 0 0	20 0 0	...	...	...
...	...	...	4 0 0	4 0 0	3 10 0	24 0 0	24 0 0	24 0 0	2 18 0	3 4 0	4 2 0
...	...	...	5 8 0	5 8 0	5 8 0	...	...	...	2 12 0	2 12 0	4 0 0
...	...	...	6 0 0	6 0 0	5 4 0	...	...	...	3 0 0	3 0 0	4 0 0
...	...	...	5 4 0	5 8 0	5 4 0	14 8 0	14 0 0	17 8 0	...	...	...
3 9 0	3 9 0	3 15 0	3 0 0	3 0 0	3 0 0	15 0 0	15 0 0	15 0 0	2 12 0	2 12 0	3 0 0
...	...	...	3 5 3	3 5 3	...	...	...	...	...	...	...
...	...	...	4 0 0	4 0 0	...	14 0 0	15 0 0	19 0 0	...	...	...
3 16 0	3 14 0	4 8 0	5 12 0	5 12 0	4 14 0	24 8 0	24 8 0	20 8 0	...	...	...
...	...	...	4 11 0 to 5 0 0	4 11 0 to 5 0 0	3 10 0 to 4 0 0	20 0 0	20 0 0	20 0 0	...	...	...

GHI (CLARIFIED BUTTER).			TOBACCO LEAF.			HIDES (COW).			GRASS.		
Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.
51	52	53	54	55	56	57	58	59	60	61	62
Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.
33 0 0	32 0 0	28 0 0	6 8 0	6 8 0	7 0 0	240-0-0 per 100 pieces.	204-0-0 per 100 pieces.	240-0-0 per 100 pieces.	6 4 0	6 4 0	6 8 0
30 0 0	30 0 0	26 0 0	...	...	...	...	...	...	...	...	...
33 0 0	33 0 0	32 0 0	5 0 0	4 12 0	5 8 0	Uncleaned hides, per piece—			...	...	...
36 0 0	38 0 0	29 0 0	6 8 0	6 4 0	6 12 0	Cleaned hides, per piece—			...	...	...
30 0 0	30 0 0	30 0 0	6 0 0	6 0 0	4 8 0	...	...	...	6	6	8
35 0 0	35 0 0	35 0 0	6 8 0	6 8 0	8 0 0	25 0 0	25 0 0	27 0 0	4 0 0	4 0 0	8 12 0
40 0 0	40 0 0	36 0 0	10 0 0	10 0 0	9 0 0	20 0 0	20 0 0	18 0 0	...	...	...
26 0 0	26 0 0	22 0 0	3 0 0	3 0 0	3 0 0	...	...	...	0 5 0	0 5 0	0 5 0
26 10 6	26 10 6	22 13 0	10 0 0	10 0 0	11 7 0	...	...	...	...	...	...
32 0 0	32 0 0	25 10 0	4 0 0	4 4 0	5 0 0	...	...	...	...	...	...
33 0 0	33 8 0	30 8 0	7 0 0	8 0 0	4 0 0	25 0 0	23 0 0	22 0 0	20 0 0	20 0 0	20 0 0
26 10 0	26 10 0	26 10 0	8 0 0	8 0 0	8 0 0	...	...	...	...	...	...
33 0 0	32 0 0	32 0 0	13 0 0	13 0 0	13 0 0	1 4 0	1 4 0	2 0 0	0 8 4	0 8 4	0 8 0

in the undermentioned *Marts* of Bengal on the 28th February 1898.

STRAW.			JUAR STALKS.			PRICES PER MAUND OF 40 STANDARD SEERS.									MARTS.
						IRON.			FIREWOOD.			SALT.			
Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.	
63	64	65	66	67	68	69	70	71	73	73	74	75	76	77	78
Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	
5 4 0 per kahan.	5 4 0	5 4 0	...	...	...	6 0 0	6 0 0	5 0 0	0 7 0	0 7 0	0 7 0	3 7 0	3 8 0	3 10 0	1. Calcutta.
4 8 0 per kahan.	4 8 0	6 0 0	...	...	...	...	...	6 8 0	0 8 0	0 8 0	0 8 0	3 6 0	3 6 0	3 5 0	2. Burdwan.
1 8 0 per kahan.	1 12 0	1 12 0	...	...	...	4 4 0 to 4 8 0	4 4 0 to 4 8 0	4 4 0 to 8 0	0 4 0	0 4 0	0 4 0	3 10 0	3 10 0	3 15 0	3. Midnapore.
1 0 0 per maund.	1 0 0	0 10 0	...	...	...	8 0 0	8 0 0	8 0 0	0 4 0	0 4 0	0 4 0	3 13 0	3 13 0	4 1 0	4. Pabna.
6 bundles per rupee.	6	8	...	...	...	6 8 0	6 8 0	6 0 0	0 9 0	0 9 0	0 6 0	4 8 0	4 0 0	4 1 0	5. Rangpur.
...	...	...	...	...	...	5 0 0	5 0 0	5 8 0	0 4 0	0 4 0	0 4 9	3 11 0	3 12 0	4 3 0	6. Dacca.
...	...	...	...	...	...	5 0 0	5 0 0	5 4 0	...	...	...	3 13 0	3 12 0	4 12 0	7. Chittagong.
0 6 0 per maund.	0 6 0	0 7 0	...	...	...	8 0 0	8 0 0	8 0 0	0 5 0	0 5 0	0 5 0	3 10 0	3 10 0	3 8 0	8. Patna.
...	...	...	...	...	...	8 0 0	8 0 0	8 0 0	0 4 0	0 4 0	0 4 0	3 10 0	3 10 0	3 10 0	9. Munsherpur.
...	...	...	...	...	...	5 4 0	5 4 0	4 8 0	0 6 4	0 6 6	0 4 0	3 14 0	3 14 0	4 0 0	10. Bhagalpur.
2 10 0 per kahan.	2 10 0	2 10 0	...	...	...	4 8 0	4 8 0	4 8 0	0 4 0	4 0 0	4 0 0	8 2 0	8 2 0	3 0 0	11. Cuttack.
No fixed rate.			...	...	...	5 11 0	5 11 0	5 8 0	0 4 0	0 4 0	0 4 0	4 8 0	4 2 0	4 8 0	12. Ranchi.
															Panga.

M. FINUCANE,
Secretary to the Govt. of Bengal.

STOCKS OF RICE IN AND AROUND CALCUTTA.

No. 297 Statist.—The following is published for general information.

M. FINUCANE,
Secy. to the Govt. of Bengal.

Statement showing the Stocks of Rice in and around Calcutta during February 1898.

STOCK IN HAND AS COMPILED BY—

NAME OF MART.	1st week of March 1897.	1st week of April 1897.	1st week of May 1897.	1st week of June 1897.	1st week of July 1897.	1st week of August 1897.	1st week of Sept. 1897.	1st week of Oct. 1897.	1st week of Nov. 1897.	1st week of Dec. 1897.	1st week of Jan. 1898.	1st week of Feb. 1898.	1st week of March 1898.
Bellaghat	Mds. 5,37,000	Mds. 4,53,000	Mds. 2,83,000	Mds. 2,12,500	Mds. 2,16,500	Mds. 2,32,500	Mds. 1,27,000	Mds. 1,14,300	Mds. 94,700	Mds. 84,900	Mds. 80,300	Mds. 6,40,900	Mds. 5,39,500
Ultadanga	30,900	28,200	27,500	26,000	21,300	15,700	12,500	12,300	12,600	10,600	18,000	34,200	42,000
Chittur, Golabaree, Kumar- kooly, Hatkhola, and Culp Ghat.	1,30,300	1,77,500	1,80,400	1,54,000	2,14,500	1,70,200	1,34,100	1,22,100	1,08,000	1,04,700	1,34,300	1,73,400	2,12,300
Patharghat, Posta, and Jorabagan.	4,000	2,600	2,100	1,550	1,000	2,000	1,450	600	1,250	1,450	2,500	2,700	4,900
Tollygunge, Chetia, Kidderpore, and Munshiganj.	1,51,000	1,17,500	88,000	94,800	60,100	77,900	73,700	73,000	45,700	64,600	73,700	82,000	1,16,800
Minor bazars (1)	3,40,000	2,40,000	2,40,000	2,40,000	2,40,000	2,40,000	2,40,000	2,40,000	2,40,000	2,40,000	2,40,000	2,40,000	2,40,000
Other retail shops (1)	2,50,000	2,40,000	2,40,000	2,40,000	2,50,000	2,50,000	2,50,000	2,50,000	2,50,000	2,50,000	2,50,000	2,50,000	2,50,000
Bankristopur	60,700	81,100	71,700	72,400	70,175	72,500	47,100	36,900	30,300	43,400	61,000	79,500	1,32,400
Baidyabati, Nawabganj, Bhe- drewar, and Chandernagore.	7,250	13,050	8,075	6,033	10,550	11,425	4,175	2,916	3,178	1,745	1,840	Figures not available.	3,439
Total	14,30,000	13,03,950	12,21,675	11,48,233	11,23,935	10,80,525	8,93,025	8,32,608	7,83,928	7,09,435	8,61,040	13,12,300	16,44,929
On Railway premises on both sides of the river.†	27,974 (on 28th Feb. 1897.)	1,31,533 (on 4th April 1897.)	1,17,619 (on 1st May 1897.)	1,15,092 (on 29th May 1897.)	2,09,893 (on 3rd July 1897.)	75,619 (on 31st July 1897.)	2,31,706 (on 4th Sep- tember 1897.)	7,623 (on 9th Oct. 1897.)	85,743 (on 30th Oct. 1897.)	32,225 (on 4th Dec. 1897.)	15,336 (on 1st Jan. 1898.)	21,833 (on 3rd Feb. 1898.)	12,519 (on 3rd March 1898.)
On boats not yet unloaded— By Port Commissioners' re- turns.	51,633 (27th Feb. to 1st March 1897.)	24,378 (3rd to 5th April 1897.)	29,553 (1st to 3rd May 1897.)	41,663 (20th to 31st May 1897.)	36,407 (3rd to 5th July 1897.)	34,639 (31st July to 2nd Aug. 1897.)	23,895 (4th to 5th Sept. 1897.)	40,373 (9th to 11th Oct. 1897.)	31,503 (15th Oct. to 1st Nov. 1897.)	39,679 (4th to 5th Dec. 1897.)	66,881 (1st to 3rd Jan. 1898.)	44,514 (1st to 3rd Feb. 1898.)	49,670 (1st to 3rd March 1898.)
By Canal returns	56,324 (27th Feb. to 1st March 1897.)	15,917 (3rd to 5th April 1897.)	11,925 (1st to 3rd May 1897.)	14,809 (29th to 31st May 1897.)	8,918 (3rd to 5th July 1897.)	6,409 (31st July to 2nd Aug. 1897.)	13,055 (4th to 5th Sept. 1897.)	9,798 (9th to 11th Oct. 1897.)	7,138 (15th Oct. to 1st Nov. 1897.)	15,753 (4th to 5th Dec. 1897.)	87,981 (1st to 3rd Jan. 1898.)	1,26,581 (1st to 3rd Feb. 1898.)	84,884 (1st to 3rd March 1898.)
Grand total of Stocks	15,55,919	15,34,778	13,79,804	13,19,857	13,78,287	11,97,370	11,51,648	9,10,417	8,61,608	8,93,321	10,20,947	15,07,237	17,92,017

* This mart is in the Howrah district, and the figures have been obtained by local enquiry.

† Figures furnished by the Collector of Hooghly.

‡ Ditto by the Railway authorities.

(1) Estimated as a constant quantity.

STATISTICAL DEPARTMENT,
The 8th March 1898.

M. FINUCANE,
Secretary to the Government of Bengal.

Abstract of the Results of Meteorological Observations taken at the Alipore Observatory in the month of February 1898.

	Inches.	Date.	Hour.
The mean pressure of the month ...	29.893		
The average pressure of February from 24 years' registers ...	29.945		
The highest pressure in the month ...	30.089	28th	10
The lowest pressure in the month ...	29.548	19th	16
The range of pressure ...	0.541		
The total number of hours of bright sunshine during the month	239.8		
The maximum possible number of hours of sunshine ...	318.0		
The mean temperature of the month ...	70.4		
The average temperature of February from 24 years' registers	73.0		
The highest temperature in the month ...	89.1	18th	
The lowest temperature in the month ...	50.2	22nd	
The range of temperature during the month ...	38.9		
The mean daily range of temperature ...	21.3		
The greatest range of temperature in one day ...	30.3	23rd & 28th	
The mean humidity of the month ...	66		
The average humidity of February from 24 years' registers ...	67		
The mean vapour tension of the month ...	0.481		
The average vapour tension of February from 9 years' registers	0.538		
The mean cloud proportion of the month ...	2.07		
The average cloud proportion of February from 21 years' registers ...	1.90		
The total rainfall of the month ...	nil.		
The total rainfall indicated by a Beckley's self-registering rain-gauge (mouth of the gauge about 52 feet above the ground)	nil.		
The average fall of February from 48 years' registers ...	0.87		
The greatest fall in 24 hours ...	nil.		
The number of rainy days in the month ...	nil.		
The average number of rainy days in February from 24 years' registers ...	3		
The mean maximum equilibrium temperature of solar radiation during the month ...	135.4		
The mean difference of sun and air temperatures ...	53.8		
The greatest sun temperature ...	142.7	16th & 18th	
The greatest excess of sun over air temperature ...	59.9	4th	
The mean temperature of the nocturnal radiation thermometer on woollen cloth ...	52.6		
The mean depression of the nocturnal radiation thermometer below the minimum air temperature at 4 feet above the ground ...	7.9		
The greatest depression of the nocturnal radiation thermometer below the minimum air temperature ...	12.6	24th	
The mean movement of the wind per day ...	65.9		
The greatest movement of the wind in one day ...	148.0	19th	
The greatest movement of the wind in one hour ...	14.0	18th, 1 to 2 p.m.	
The number of hours with winds from each of the 8 points—			

N. 79, N.E. 35, E. 23, S.E. 4, S. 65, S.W. 118, W. 74, N.W. 84, Calm 190.

The results of observations at the Alipore Observatory are not rigorously comparable with the registers of past years (at the Park Street Observatory). The barometer is about 3 feet higher at Alipore, and, other things being equal, reads therefore .003 lower. The diurnal range of temperature is also greater at Alipore, and the mean temperature apparently about 2.1° lower; and, finally, the thermometer which furnished the record of temperature at the Surveyor-General's Office during 20 years and upwards is found to read 0.6 higher than the Kew standard thermometer, which is the standard of reference at the present Observatory.

J. H. GILLILAND,

METEOROLOGICAL OFFICE, GOVT. OF INDIA,
Calcutta, the 7th March 1898.

For Meteorological Reporter to the Govt. of India.

Abstract of the Results of the Barometric and Thermometric Observations taken at 10 a.m. at the Meteorological Office, Chowringhee, in the month of February 1898.

	Inches.	Date.
The mean pressure at 10 A.M. during the month ...	29.969	
The mean temperature at 10 A.M. during the month ...	74.2	
The highest temperature during the month ...	90.8	18th.
The lowest temperature during the month ...	51.7	21st and 22nd.
The absolute range of temperature during the month ...	39.1	
The mean daily range of temperature during the month ...	22.4	
The greatest range of temperature in one day during the month ...	31.1	23rd.
The mean 10 A.M. humidity during the month ...	57	%
The mean 10 A.M. vapour tension during the month ...	.488	Inch.
The total rainfall of the month ...	Nil.	
The greatest fall in 24 hours ...		
The number of rainy days in the month ...	Nil.	Days.

C. LITTLE,

Meteorological Reporter to the Govt. of Bengal.

METEOROLOGICAL OFFICE, BENGAL,

The 7th March 1898.

Results of the Barometrical and Thermometrical Observations taken at the Meteorological Office, Chowringhee, from 27th February to 5th March 1898.

MONTH.	Date.	Pressure at 10 A.M. corrected and reduced to 32° Fahr.	TEMPERATURE.					HYGROMETRY.			Rainfall, past 24 hours.	
			Daily mean.	Maximum.	Range.	Minimum.	Dry bulb at 10 A.M.	Wet bulb at 10 A.M.	Vapour tension at 10 A.M.	Dew point at 10 A.M.		Humidity at 10 A.M.
1898.		Inches.	°		°	°	°	°	Inches.	°	%	Inches.
February	27th	30.082	75.2	88.0	25.6	62.4	76.6	70.6	.669	67.3	73	Nil.
"	28th	30.085	74.2	89.4	30.5	58.9	77.6	66.8	.514	69.7	84	"
March	1st	29.998	78.1	91.8	27.4	64.4	77.4	71.6	.699	68.6	74	"
"	2nd	30.074	81.0	92.6	23.2	69.4	80.6	74.5	.774	71.6	74	"
"	3rd	30.036	77.7	88.5	21.6	66.9	78.6	70.6	.648	66.1	66	"
"	4th	30.000	68.0	79.0	22.1	56.0	67.2	51.7	.180	31.8	27	"
"	5th	30.063	66.7	81.5	29.6	51.9	72.6	55.7	.221	37.0	28	"

The mean 10 A.M. pressure of the seven days ... 30.020

The mean temperature of the seven days ... 74.4

The extreme variation of temperature ... 40.7

The maximum temperature ... 92.6

The mean 10 A.M. relative humidity of the seven days ... 57

The total fall of rain from 27th February to 5th March 1898 ... Nil

The daily mean temperatures are the crude means of maximum and minimum temperatures.

METEOROLOGICAL OFFICE, BENGAL,

The 7th March 1898.

C. LITTLE,

Meteorological Reporter to the Govt. of Bengal.

Results of the Meteorological Observations taken at the Alipore Observatory from
27th February to 5th March 1898.

Month.	Date.	Maximum in sun.	Number of hours of bright sunshine.	Mean pressure barometer at 32° Fahr.	TEMPERATURE.				HYGROMETRY.				WIND.		Rain.	WEATHER.
					Mean.	Maximum.	Range.	Minimum.	Mean wet bulb.	Vapour tension.	Dew point.	Humidity.	Prevailing direction.	Miles recorded.		
1898.				Inches.						Inches.		%			Inches.	
Feb.	27th	139.9	10.0	29.992	71.6	86.4	25.0	61.4	62.8	0.458	56.5	64	NNW and calm	29	Nil	Morning cloudy, day and night clear, o. =
"	28th	141.5	9.2	30.000	70.9	87.3	30.8	57.0	61.9	.488	55.2	68	WNW and calm	24	"	Clear, a, =
March	1st	144.7	9.2	29.931	74.2	89.7	26.6	63.1	67.3	.577	63.0	73	SW by W, and calm.	48	"	Clear, a, =
"	2nd	143.3	9.8	29.866	77.9	91.0	22.3	68.7	69.0	.592	63.7	65	SW and SSW	96	"	Morning cloudy, day and night chiefly clear, o.
"	3rd	138.5	8.7	.863	75.2	86.7	20.5	66.2	65.2	.527	60.4	62	ENE, NNE, and N.	89	"	Chiefly clear.
"	4th	135.1	8.1	.936	64.8	76.7	19.8	56.9	51.6	.209	35.6	34	NNW and calm	104	"	Clear.
"	5th	135.2	8.6	.989	65.9	79.3	29.1	50.2	53.6	.250	40.2	39	NNW and calm	33	"	Clear.

The mean pressure of the seven days Inches. 29.940

The average pressure of the corresponding period for 24 years, Surveyor-General's Office 29.866

The total number of hours of bright sunshine Hours. 63.5

The maximum possible number of hours of sunshine 81.7

The mean temperature of the seven days 71.5

The average temperature of the corresponding period for 24 years, Surveyor-General's Office 77.5

The extreme variation of temperature 40.8

The maximum temperature 91.0

The highest velocity of the wind in one hour Miles. 12

The mean relative humidity % 57

The average relative humidity of the corresponding period for 24 years, Surveyor-General's Office 67

The total fall of rain from 27th February to 5th March 1898 Inches. Nil.

The average fall of the corresponding period for 24 years, Surveyor-General's Office 0.58

The total fall from 1st January to 5th March 1898 0.36

The average fall of the corresponding period for 24 years, Surveyor-General's Office 1.97

The mean pressure, temperature, &c., are deduced from the traces of the Barograph and Thermograph, and from observations made at 6h., 10h., 16h., and 22h.

The maximum and minimum temperatures are obtained from self-registering thermometers. All the thermometers are verified and the readings have been corrected to a standard constructed and verified at the Kew Observatory. They are exposed under a thatched shed open at the sides, and are suspended four feet above the ground.

The barometer readings are corrected approximately to those of the standard, Newman's No. 36, formerly at the Surveyor-General's Office.

The hygrometric elements are obtained from Tables III, IV, and V of the official tables computed in the Meteorological Office, and based on Regnault's modifications of August's formula.

The directions and the movement of the wind are taken from the trace of a Beckley's anemograph.

The mouth of the rain-gauge is one foot above the ground.

o, overcast; =, fog; a, dew.

METEOROLOGICAL OFFICE, GOVT. OF INDIA,
Calcutta, the 7th March 1898.

J. H. GILLILAND,
For Meteorological Reporter to the Govt. of India.

Vital Statistics of the Districts of Bengal for the month of December 1897.

Divisions.	Districts.	BIRTHS.		DEATHS.										AVERAGE OF CORRESPONDING MONTHS OF PREVIOUS FIVE YEARS.	REMARKS.						
		Population under registration.	Number registered.	CHOLERA.		SMALL-POX.		FEVER.		DIPTERYG AND DIARRH.		OTHER CAUSES.				TOTAL OF ALL CAUSES.					
				Ratio per 1,000 of population.	Number registered.	Ratio per 1,000 of population.	Number registered.	Ratio per 1,000 of population.	Number registered.	Ratio per 1,000 of population.	Number registered.	Ratio per 1,000 of population.	Number registered.			Ratio per 1,000 of population.	Number registered.	Ratio per 1,000 of population.			
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
Burdwan	Burdwan	1,301,890	2,651	25,074	53	7.6	21	7.2	2,118	16.24	192	1.4	17	1.2	515	4.44	1,898	14.58	4,072	30.90	Average of corresponding month of previous five years.
	Bishnupur	1,088,354	2,270	34,200	54	7.2	6	4.7	1,283	19.52	17	1.2	6	0.4	401	3.66	1,776	16.34	2,548	23.38	
	Midnapore	2,681,106	7,467	33,075	480	1.9	53	2.4	6,812	24.72	184	7.2	13	0.9	1,715	6.32	7,800	29.08	7,963	29.69	
	Hoochly, including Seranpore	1,094,298	2,186	25,441	117	2.2	5	0.4	3,768	34.68	197	1.8	19	0.2	483	4.38	3,051	27.83	3,051	27.83	
Presidency	Haverah	785,695	2,074	32,052	61	7.4	3	0.9	1,338	20.76	357	3.2	28	0.2	490	7.68	2,268	20.88	2,445	22.49	Average of corresponding month of previous five years.
	24-Parganas	1,092,095	5,073	31,800	479	3.0	8	0.4	4,773	37.22	137	1.2	68	0.6	551	5.05	3,474	31.79	3,474	31.79	
	Calcutta	1,081,360	1,041	19,700	25	0.0	13	0.6	2,708	19.68	20	1.2	39	0.3	1,010	9.31	3,301	30.54	3,301	30.54	
	Murshidabad	1,544,108	4,757	34,600	318	1.9	2	0.1	3,154	20.40	9	0.8	13	0.1	486	3.17	2,600	24.84	2,600	24.84	
Rajshahi	Jessore	1,388,946	2,900	37,744	328	2.0	3,674	26.40	32	0.8	19	0.2	845	6.32	4,459	40.92	4,459	40.92	Average of corresponding month of previous five years.
	Khulna	1,177,828	2,900	40,000	191	1.9	...	...	3,154	31.41	32	0.7	19	0.2	845	6.32	4,459	40.92	4,459	40.92
	Balshahi	1,177,828	2,900	40,000	191	1.9	...	...	3,154	31.41	32	0.7	19	0.2	845	6.32	4,459	40.92	4,459	40.92
	Dumuria	1,177,828	2,900	40,000	191	1.9	...	...	3,154	31.41	32	0.7	19	0.2	845	6.32	4,459	40.92	4,459	40.92
Dacca	Jalpaiguri	1,080,730	4,381	40,000	103	7.3	3	0.2	5,737	52.14	18	0.6	19	0.2	188	1.94	6,088	48.96	6,088	48.96	Average of corresponding month of previous five years.
	Darjeeling	233,314	1,881	32,228	188	7.3	...	...	1,915	52.69	18	0.6	19	0.2	188	1.94	6,088	48.96	6,088	48.96
	Rangpur	2,088,463	8,311	39,400	297	3.8	...	...	8,055	42.69	35	1.0	17	0.9	368	3.75	10,370	37.50	10,370	37.50
	Bohara	2,740,496	2,740	49,996	143	1.2	...	...	2,907	31.08	91	1.1	8	0.6	115	1.43	4,158	35.36	4,158	35.36
Chittagong	Patna	1,801,167	3,543	32,844	44	2.4	1	0.1	3,453	33.08	397	1.9	42	1.2	1,705	8.92	17,708	40.93	17,708	40.93	Average of corresponding month of previous five years.
	Gaya	1,773,383	4,811	32,529	7	0.3	...	...	3,112	31.44	74	2.4	42	1.2	1,705	8.92	17,708	40.93	17,708	40.93
	Shahabad	2,134,831	5,858	32,529	143	1.2	...	...	3,453	33.08	397	1.9	42	1.2	1,705	8.92	17,708	40.93	17,708	40.93
	Saran	2,080,579	5,581	32,529	3	0.0	...	...	3,453	33.08	397	1.9	42	1.2	1,705	8.92	17,708	40.93	17,708	40.93
Patna	Champania	1,838,468	5,581	32,529	3	0.0	3,453	33.08	397	1.9	42	1.2	1,705	8.92	17,708	40.93	17,708	40.93	Average of corresponding month of previous five years.
	Buxar	2,212,837	5,758	32,529	3	0.1	...	...	3,453	33.08	397	1.9	42	1.2	1,705	8.92	17,708	40.93	17,708	40.93
	Barh	1,801,955	5,581	32,529	32	1.2	...	...	3,400	40.32	21	2.4	38	3.6	428	4.8	4,093	30.24	4,093	30.24
	Chittagong	1,773,383	4,811	32,529	7	0.3	...	...	4,400	40.92	236	1.3	41	3.6	327	3.75	8,945	76.68	8,945	76.68
Rangpur	Patna	1,773,383	4,811	32,529	7	0.3	4,400	40.92	236	1.3	41	3.6	327	3.75	8,945	76.68	8,945	76.68	Average of corresponding month of previous five years.
	Gaya	2,134,831	5,858	32,529	4	0.2	...	...	4,400	40.92	236	1.3	41	3.6	327	3.75	8,945	76.68	8,945	76.68
	Shahabad	2,080,579	5,581	32,529	4	0.2	...	...	4,400	40.92	236	1.3	41	3.6	327	3.75	8,945	76.68	8,945	76.68
	Saran	2,080,579	5,581	32,529	4	0.2	...	...	4,400	40.92	236	1.3	41	3.6	327	3.75	8,945	76.68	8,945	76.68
Orissa	Champania	1,838,468	5,581	32,529	3	0.0	4,400	40.92	236	1.3	41	3.6	327	3.75	8,945	76.68	8,945	76.68	Average of corresponding month of previous five years.
	Buxar	2,212,837	5,758	32,529	3	0.1	...	...	4,400	40.92	236	1.3	41	3.6	327	3.75	8,945	76.68	8,945	76.68
	Barh	1,801,955	5,581	32,529	32	1.2	...	...	4,400	40.92	236	1.3	41	3.6	327	3.75	8,945	76.68	8,945	76.68
	Chittagong	1,773,383	4,811	32,529	7	0.3	...	...	4,400	40.92	236	1.3	41	3.6	327	3.75	8,945	76.68	8,945	76.68
Bhagalpur	Monkhyr	2,088,021	5,804	34,659	13	0.7	4,400	40.92	236	1.3	41	3.6	327	3.75	8,945	76.68	8,945	76.68	Average of corresponding month of previous five years.
	Bhagalpur	2,088,021	5,804	34,659	13	0.7	...	...	4,400	40.92	236	1.3	41	3.6	327	3.75	8,945	76.68	8,945	76.68
	Purnea	2,088,021	5,804	34,659	13	0.7	...	...	4,400	40.92	236	1.3	41	3.6	327	3.75	8,945	76.68	8,945	76.68
	Madia	2,088,021	5,804	34,659	13	0.7	...	...	4,400	40.92	236	1.3	41	3.6	327	3.75	8,945	76.68	8,945	76.68
Uttar Pradesh	Southern Parganas	1,713,776	3,800	36,658	15	0.0	4,400	40.92	236	1.3	41	3.6	327	3.75	8,945	76.68	8,945	76.68	Average of corresponding month of previous five years.
	Cuttack	1,587,671	4,887	30,448	15	0.0	...	...	4,400	40.92	236	1.3	41	3.6	327	3.75	8,945	76.68	8,945	76.68
	Palasore	2,088,021	5,804	34,659	13	0.7	...	...	4,400	40.92	236	1.3	41	3.6	327	3.75	8,945	76.68	8,945	76.68
	Puri	2,088,021	5,804	34,659	13	0.7	...	...	4,400	40.92	236	1.3	41	3.6	327	3.75	8,945	76.68	8,945	76.68
Bihar	Hazaribagh	1,164,371	2,114	27,729	6	0.6	4,400	40.92	236	1.3	41	3.6	327	3.75	8,945	76.68	8,945	76.68	Average of corresponding month of previous five years.
	Deoria	1,164,371	2,114	27,729	6	0.6	...	...	4,400	40.92	236	1.3	41	3.6	327	3.75	8,945	76.68	8,945	76.68
	Pratapgarh	1,164,371	2,114	27,729	6	0.6	...	...	4,400	40.92	236	1.3	41	3.6	327	3.75	8,945	76.68	8,945	76.68
	Meerut	1,164,371	2,114	27,729	6	0.6	...	...	4,400	40.92	236	1.3	41	3.6	327	3.75	8,945	76.68	8,945	76.68
Total	Singbhum	1,164,371	2,114	27,729	6	0.6	4,400	40.92	236	1.3	41	3.6	327	3.75	8,945	76.68	8,945	76.68	Average of corresponding month of previous five years.
	Total	71,009,617	294,719	34,556	12,766	1.7	637	0.9	103,812	27.60	4,387	7.2	1,355	1.9	32,254	4.5	5,400	7.6	315,101	36.24	
	Average of corresponding month of previous five years.	...	297,120	39,96	10,085	1.4	776	1.1	103,812	27.60	4,730	7.2	1,355	1.9	32,254	4.5	5,400	7.6	315,101	36.24	
	Difference + or -	...	-32,401	-5,40	-7,369	-1.32	-7,369	-1.46	-19,457	-3.24	-483	-7.2	-1,355	-1.9	-32,254	-4.5	-5,400	-7.6	-315,101	-36.24	

H. J. DYSON, Surgeon-Major, F.R.C.S.

OFFICE OF SANITARY COMMISSIONER FOR BENGAL.

H. J. DYSON, Surgeon-Major, F.R.C.S.,

OFFICE OF SANITARY COMMISSIONER FOR BENGAL,
The 6th March 1898.

Vital Statistics of Towns in Bengal with a population of 20,000 and over during the month of December 1897.

Districts.	Towns.	Population under 10,000.	BIRTHS.		DEATHS.										AVERAGE OF CORRESPONDING MONTH OF PREVIOUS FIVE YEARS.	REMARKS.					
			Number registered.	Ratio per 1,000 of population.	CHOLERA.		SMALL-POX.		FEVER.		DYSENTERY AND DIARRHÆA.		INJURY.				OTHER CAUSES.		TOTAL OF ALL CAUSES.		
					Number registered.	Ratio per 1,000 of population.	Number registered.	Ratio per 1,000 of population.	Number registered.	Ratio per 1,000 of population.	Number registered.	Ratio per 1,000 of population.	Number registered.	Ratio per 1,000 of population.			Number registered.	Ratio per 1,000 of population.	Number registered.	Ratio per 1,000 of population.	Number registered.	Ratio per 1,000 of population.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
Burdwan	...	24,477	40	17.04	...	...	...	...	76	20.40	22	7.68	3	1.60	15	5.16	115	39.94	170	59.16	...
Midnapore	...	32,561	50	35.00	...	...	...	...	79	29.38	23	10.32	5	1.80	45	15.96	155	47.60	110	43.04	...
Hugly	...	33,086	71	23.00	...	...	...	...	143	47.64	24	8.64	2	1.79	33	11.52	164	49.74	171	54.56	...
Howrah	...	110,000	254	20.16	...	...	...	...	233	23.84	100	10.20	7	2.29	81	24.40	229	69.76	169	53.04	...
24-Parganas	1. Bardwan	...	24,477	40	17.04	...	...	...	76	20.40	22	7.68	3	1.60	15	5.16	115	39.94	170	59.16	...
	2. Midnapore	...	32,561	50	35.00	...	...	...	79	29.38	23	10.32	5	1.80	45	15.96	155	47.60	110	43.04	...
	3. Hugly and Chinsura	...	33,086	71	23.00	...	...	...	143	47.64	24	8.64	2	1.79	33	11.52	164	49.74	171	54.56	...
	4. Howrah	...	110,000	254	20.16	...	...	...	233	23.84	100	10.20	7	2.29	81	24.40	229	69.76	169	53.04	...
	5. Cassipore-Chikpur	...	31,423	43	16.52	...	...	...	30	12.72	21	7.59	1	0.36	13	4.44	130	40.56	142	44.36	...
	6. Manikala	...	22,806	37	15.44	...	...	...	30	12.72	21	7.59	1	0.36	13	4.44	130	40.56	142	44.36	...
	7. Buragore	...	34,278	37	15.44	...	...	...	30	12.72	21	7.59	1	0.36	13	4.44	130	40.56	142	44.36	...
	8. South Suburag	...	25,000	40	20.00	...	...	...	101	33.04	7	1.20	7	2.80	11	3.60	151	44.04	120	48.36	...
	9. South Barrackpore	...	25,000	40	20.00	...	...	...	101	33.04	7	1.20	7	2.80	11	3.60	151	44.04	120	48.36	...
	10. Including Titagarh Municipality.	...	25,000	40	20.00	...	...	...	101	33.04	7	1.20	7	2.80	11	3.60	151	44.04	120	48.36	...
Calcutta	11. Kalyani	...	29,724	64	21.72	7	2.76	...	190	40.32	4	1.56	...	...	3	1.20	114	47.08	128	49.26	...
	12. North Barrackpore	...	20,000	55	27.50	...	...	...	61	30.50	16	8.16	...	...	...	4.56	143	52.36	109	54.56	...
	13. Calcutta	...	681,600	1,000	14.69	...	...	...	794	13.52	425	7.44	...	...	1,010	17.76	2,303	40.56	2,341	41.16	...
	14. Krishnagar	...	26,800	61	22.78	...	...	...	60	28.84	4	1.80	...	...	...	2.24	94	35.00	107	40.88	...
	15. Sanikpur	...	26,457	61	22.78	...	...	...	40	19.20	...	...	...	...	...	5.40	75	29.12	100	38.00	...
	16. Berhampore	...	23,516	57	24.24	...	...	...	12	5.16	...	...	...	...	...	1.20	48	20.52	100	43.00	...
	17. Ranpur Bonga	...	21,007	66	31.46	...	...	...	40	19.20	...	...	...	...	...	1.20	48	20.52	100	43.00	...
	18. Baranagar	...	23,367	53	24.42	...	...	...	40	19.20	...	...	...	...	...	1.20	48	20.52	100	43.00	...
	19. Baranagar	...	23,367	53	24.42	...	...	...	40	19.20	...	...	...	...	...	1.20	48	20.52	100	43.00	...
	20. Chittagong	...	24,000	61	25.42	...	...	...	40	19.20	...	...	...	...	...	1.20	48	20.52	100	43.00	...
	21. Patna City	...	164,102	445	27.10	...	...	...	...	238	14.50	63	3.86	...	...	185	11.48	489	29.88	...	
	22. Bihar	...	44,425	127	28.59	...	...	...	...	60	13.44	...	...	...	...	...	2.24	133	30.12	...	
	23. Dinapore	...	60,385	151	25.00	...	...	...	...	225	37.06	13	5.16	...	...	...	6.16	288	47.86	...	
	24. Gaya	...	40,000	118	29.50	...	...	...	...	38	9.50	...	...	...	...	...	6.16	288	47.86	...	
	25. Shahabad	...	27,713	56	20.20	...	...	...	...	38	13.86	...	...	...	...	...	6.16	288	47.86	...	
	26. Baranagar	...	27,713	56	20.20	...	...	...	...	38	13.86	...	...	...	...	...	6.16	288	47.86	...	
	27. Chapra	...	27,713	56	20.20	...	...	...	...	38	13.86	...	...	...	...	...	6.16	288	47.86	...	
	28. Bettiah	...	27,713	56	20.20	...	...	...	...	38	13.86	...	...	...	...	...	6.16	288	47.86	...	
	29. Munshiganj	...	27,713	56	20.20	...	...	...	...	38	13.86	...	...	...	...	...	6.16	288	47.86	...	
	30. Hajipur	...	27,713	56	20.20	...	...	...	...	38	13.86	...	...	...	...	...	6.16	288	47.86	...	
	31. Dhanbani	...	27,713	56	20.20	...	...	...	...	38	13.86	...	...	...	...	...	6.16	288	47.86	...	
	32. Monghyr	...	27,713	56	20.20	...	...	...	...	38	13.86	...	...	...	...	...	6.16	288	47.86	...	
	33. Bhagalpur	...	27,713	56	20.20	...	...	...	...	38	13.86	...	...	...	...	...	6.16	288	47.86	...	
	34. Cuttack	...	27,713	56	20.20	...	...	...	...	38	13.86	...	...	...	...	...	6.16	288	47.86	...	
35. Balasore	...	27,713	56	20.20	...	...	...	...	38	13.86	...	...	...	...	...	6.16	288	47.86	...		
36. Puri	...	27,713	56	20.20	...	...	...	...	38	13.86	...	...	...	...	...	6.16	288	47.86	...		
37. Machi	...	27,713	56	20.20	...	...	...	...	38	13.86	...	...	...	...	...	6.16	288	47.86	...		
38. ...	...	27,713	56	20.20	...	...	...	...	38	13.86	...	...	...	...	...	6.16	288	47.86	...		
Total of all towns with a population of 20,000 and over.	...	2,325,121	4,405	24.45	165	7.64	...	...	4,035	21.60	1,002	5.16	91	3.8	2,135	11.16	7,453	38.88	...	...
Average of the corresponding month of previous five years.	...	...	5,240	27.60	436	8.28	...	...	4,000	21.00	901	5.16	79	3.6	1,865	9.72	7,415	38.76	...	...
Difference + or -	...	...	655	-5.15	-211	-1.44	...	...	-15	Equal	+11	Equal	+16	+1.9	+270	+1.46	+25	+1.9	...	...

CIRCULAR AND EASTERN CANALS.

*Approximate Return of Traffic for the week ending Saturday, the 5th March 1898,
as compared with the corresponding week of the previous year.*

NATURE OF CARGO.	WEEK ENDING SATURDAY, THE 5TH MARCH 1898.			WEEK ENDING SATURDAY, THE 6TH MARCH 1897.		
	Number of boats.	Weight of cargo.	Tollage.	Number of boats.	Weight of cargo.	Tollage.
	No.	Mds.	Rs.	No.	Mds.	Rs.
Rice and paddy	571	2,04,965	3,598	576	1,22,900	2,282
Jute	171	98,200	1,522	43	27,125	350
Firewood	82	89,750	1,380	147	84,250	1,394
Other articles	802	1,93,625	3,002	956	2,46,050	3,958
Total	1,626	5,86,540	9,482	1,722	4,80,325	7,984

BENGAL CENTRAL RAILWAY COMPANY, LIMITED.

Abstract of principal Commodities carried over the Bengal Central Railway during the month of December 1897, as compared with the same month of the previous year.

STAPLES.	1897.		1896.		TOTAL.		Increase.	Decrease.
	Up.	Down.	Up.	Down.	1897.	1896.		
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
Coal and Coke carried for the Public and Foreign Railways.	2,255	2,255	2,234	16	2,273	2,206	67	2,045
Cotton, raw	4	4	2	1	4	3	1	1
Cotton, manufactured—								
Twist and yarn, European	117	117	63	54	117	63	54	54
Ditto, Indian	186	186	211	25	186	211	25	25
Piece-goods, European	1	1	2	1	1	2	1	1
Ditto, Indian								
Drugs and Chemicals—								
Intoxicating, other than Opium								
Non-intoxicating—								
Cinchona bark	2	2	2	2	2	2	2	2
Others								
Dyes and Tans—								
Indigo	2	2	1	1	2	1	1	1
Myrabolams								
Cutch	15	10	12	23	15	19	4	11
Turnerie								
Aniline Dyes	1	1	1	1	1	1	1	1
Others								
Grain and Pulse—								
Wheat	96	189	41	46	245	87	158	158
Rice in the husk	86	884	211	337	970	548	422	422
Do. not in the husk								
Jawar and bajra	46	33	61	192	74	243	169	169
Gram and pulse								
Others								
Hides and Skins—								
Hides of cattle—								
Dressed or tanned								
Raw		64	41	64	41	23	23	23
Skins of Sheep, &c.—								
Dressed or tanned								
Raw			1	1	1	1	1	1
Horns								
Jute—								
Raw	3	3,363	3	1,957	3,366	1,960	1,406	1,406
Gunny-bags and cloth	43	1	11	21	43	31	12	12
Lac—								
Stick								
Shell								
Leather, manufactured	6	4	4	6	6	4	2	2
Liquors—								
Bear								
Spirits	3	1	1	3	3	1	2	2
Wines								
Metals—								
Copper, unwrought								
Brass, ditto								
Copper, wrought	9	5	7	7	14	14	14	14
Brass, ditto	36	1	47	36	47	47	47	47
Iron	21	1	7	4	22	11	11	11
Others								
Oil—								
Kerosine	117	25	239	142	220	220	220	220
Castor								
Cocunut	8	13	13	8	13	13	13	13
Others	46	112	1	46	112	112	112	112
Oilseeds—								
Linseed	18	17	5	17	5	13	13	13
Rape and mustard		14	37	27	27	27	27	27
Til or jujibi		6	30	6	30	30	30	30
Poppy								
Earth-nuts								
Castor								
Others								
Opium								
Paper and Pasteboard	23	30	23	30	23	30	30	30
Provisions—								
Ghee	5	2	2	5	2	3	3	3
Dried fruits and nuts								
Others	73	171	103	141	241	243	2	2
Railway plant and rolling-stock carried for the Public and Foreign Railways—								
Locomotives, engines, and tenders, and parts thereof.								
Carriages and trucks, and parts thereof								
Materials—								
Steel rails and fish-plates, sleepers, and keys of steel and cast-iron.								
Other sorts								
Salt	316	13	304	4	323	308	15	15
Salt-petre, &c.—								
Salt-petre								
Other saline substances								
Silk, raw—								
Foreign								
Indian								
Silk piece-goods—								
Foreign								
Indian								
Muga								
Kodi								

STATES.	1897.		1896.		TOTAL.		Increase.	Decrease.
	Up.	Down.	Up.	Down.	1897.	1896.		
	Tons.	*Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
Spices—								
Betel-nuts...	1	634		943	635	943		318
Pepper								
Ginger								
Chillies	14	19	13	54	33	66		33
Cardamoms								
Others	4	4	8	75	8	78		70
Lime and limestone		1	10	4	1	22		21
Sugar—								
Refined or crystallised, including sugar-candy.	19		8		19	5	14	
Unrefined, viz., molasses and jaggery or gur, and other saccharine produce.	2	203	16	56	205	74	131	
Tee—								
Foreign								
Indian								
Timber	36		26		36	26	12	
Tobacco—								
Unmanufactured	51	27	198	15	78	143		65
Manufactured—								
Cigars								
Other sorts								
Wool, raw								
Wool, manufactured—								
Piece-goods, European								
Ditto, Indian								
Khawla								
All other articles of merchandise	311	371	1,473	280	682	1,353		1,041
Total	3,972	6,046	6,971	4,849	9,010	11,220	2,211	4,815

CALCUTTA, the 1st March 1898.

T. SIDDLE,
Auditor.

Weekly Return of Traffic Receipts on Indian Railways.

EAST INDIAN RAILWAY.

Approximate Return of Traffic for week ended 26th February 1898 on 1,702.46 miles open.

	COACHING TRAFFIC.		MERCHANDISE AND MINERAL TRAFFIC.		Other earnings (estimated).	Total earnings.	TRAFFIC TRAIN-MILES RUN.		
	Number of passengers.	Coaching receipts.	Weight carried.	Receipts.			Coaching.	Merchandise.	Total.
		Rs. A. P.	Mds. s.	Rs. A. P.	Rs. A. P.	Rs. A. P.			
Total traffic for the week ...	306,832	3,07,634 9 0	42,09,697 10	8,30,358 1 0	22,125 0 0	11,60,117 10 0	94,738	153,817	248,555
Or per mile of railway ...	180 11 3	180 11 3	245 10 10	481 13 10	12 15 11	675 9 0	.....	.....	.....
For previous 7½ weeks of half-year.	2,390,403*	26,38,764 4 0*	3,04,82,317 10†	†69,94,909 3 0	1,40,398 0 0‡	87,83,091 7 6	§693,700‡	§1,123,200‡	1,816,900‡
Total for 8½ weeks ...	2,696,745	29,46,418 13 0	3,46,91,914 20	68,16,267 4 0	1,71,523 0 0	99,33,209 1 0	793,438‡	1,276,107‡	2,069,545‡
COMPARISON.									
Total for corresponding week of previous year ...	300,825	3,31,833 3 3	40,47,257 20	8,97,230 1 0	25,023 9 4	12,54,094 12 7	92,536	157,111	249,647
Per mile of railway corresponding week of previous year ...	.....	194 15 0	.....	527 1 4	14 11 3	736 11 6	.....	.....	.....
Total for corresponding 8½ weeks of previous year ...	2,390,623	27,33,399 10 4	3,35,37,750 10	69,33,154 3 8	1,74,203 9 7	98,40,757 7 2	745,119	1,237,438	2,002,557

(a) The decrease is chiefly due to the running of troop extra trains in the corresponding period of 1897.

* Added number of passengers 23,497 and

Rs. 22,579

† Deducted Mds. 1,19,70 and added

Rs. 12,268

‡ Do

Rs. 897

§ Miles 10,060‡ added to coaching and 11,149‡ deducted from merchandise on account of difference between the approximate and audited figures for the week ended 15th January 1898.

TARKESSUR BRANCH RAILWAY.

Approximate Return of Traffic for week ended 26th February 1898 on 22.23 miles open.

	COACHING TRAFFIC.		MERCHANDISE AND MINERAL TRAFFIC.		Other earnings (estimated).	Total earnings.	TRAFFIC TRAIN-MILES RUN.		
	Number of passengers.	Coaching receipts.	Weight carried.	Receipts.			Coaching.	Merchandise.	Total.
		Rs. A. P.	Mds. s.	Rs. A. P.	Rs. A. P.	Rs. A. P.			
Total traffic for the week ...	26,274	6,654 10 0	16,509 0	654 12 0	10 8 0	7,321 8 0	1,330	123	1,453
Or per mile of railway ...	.....	299 7 1	.....	29 7 3	0 7 5	329 5 7	.....	.....	.....
For previous 7½ weeks of half-year.	181,023*	46,539 3 0*	1,29,554 30†	4,709 13 0†	65 0 0‡	51,318 15 0	7,683	.....	8,590
Total for 8½ weeks ...	207,296	53,193 12 0	1,45,863 30	5,364 9 0	75 8 0	58,635 5 0	9,013	1,019	10,032
COMPARISON.									
Total for corresponding week of previous year ...	25,529	5,964 4 9	52,251 10	1,031 14 0	1 7 6	7,021 10 3	1,076	112	1,188
Per mile of railway corresponding week of previous year ...	.....	269 6 1	.....	46 6 8	0 1 1	315 12 10	.....	.....	.....
Total for corresponding 8½ weeks of previous year ...	189,673‡	45,865 0 7	1,69,250 0	5,668 13 0	28 12 3	51,572 9 10	9,061	788	9,849

* Deducted number of passengers 154 and

Rs. 131

† Ditto Mds. 6,589 and

Rs. 131

‡ Added

Rs. 6

§ On account of difference between the approximate and audited figures for the week ended 15th January 1898.

DELHI-UMBALLA-KALKA RAILWAY.

Approximate Return of Traffic for week ended 26th February 1898 on 160.47 miles open.

	COACHING TRAFFIC.		MERCHANDISE AND MINERAL TRAFFIC.		Other earnings (estimated).	Total earnings.	TRAFFIC TRAIN-MILES RUN.		
	Number of passengers.	Coaching receipts.	Weight carried.	Receipts.			Coaching.	Merchandise.	Total.
		Rs. A. P.	Mds. s.	Rs. A. P.	Rs. A. P.	Rs. A. P.			
Total traffic for the week ...	16,568	13,476 1 0	1,25,772 30	23,005 3 0	67 0 0	24,148 4 0	6,997	4,906	11,903
Or per mile of railway ...	.....	83 15 8	.....	140 13 11	0 8 8	225 4 3	.....	.....	.....
For previous 7½ weeks of half-year.	226,513*	1,71,343 4 0*	6,61,980 90†	1,09,808 12 0†	507 0 0‡	2,01,154 0 0	57,567	26,926	84,493
Total for 8½ weeks ...	342,081	1,84,819 5 0	8,07,733 10	1,31,908 15 0	674 0 0	3,17,302 4 0	64,494	33,852	98,346
COMPARISON.									
Total for corresponding week of previous year ...	16,943	13,697 13 1	1,77,009 0	15,493 9 0	67 10 6	29,553 7 7	6,999	4,902	11,901
Per mile of railway corresponding week of previous year ...	.....	87 3 8	.....	96 3 9	0 8 9	184 3 3	.....	.....	.....
Total for corresponding 8½ weeks of previous year ...	120,493‡	96,839 9 8	7,65,078 0	85,120 5 0	465 8 3	1,85,044 13 11	55,023	29,773	84,796

* Added No. of passengers 819 and Rs. 743

† D. Mds. 17,037 and

Rs. 518

‡ Deducted

Rs. 6

§ On account of difference between the approximate and audited figures for the week ended 15th January 1898.

ASSAM-BENGAL RAILWAY.

Approximate Return of Traffic for the Week ended 19th February 1898, on 286 miles open.

	COACHING TRAFFIC.		MERCHANDISE AND MINERAL TRAFFIC.		Other earnings (estimated).	Total earnings.	TRAFFIC TRAIN-MILES RUN.		
	Number of passengers.	Coaching receipts.	Weight carried.	Receipts.			Coaching.	Merchandise.	Total.
Total traffic for the week ...	28,107	Rs. A. P. 18,498 0 0	Mds. s. 2,56,529 0	Rs. A. P. 8,688 0 0	Rs. A. P. 320 0 0	Rs. A. P. 27,808 0 0	3,103	4,457	7,560
Or per mile of railway ...	98'28	64'68	898'95	30'37	1'12	98'17	11'16	15'60	26'76
For previous 6 weeks of half-year (a) ...	156,227	90,828 0 0	1,314,041 0	50,482 0 0	2,533 0 0	1,41,843 0 0	18,503	25,856	44,361
Total for 7 weeks ...	184,334	1,09,326 0 0	1,570,570 0	59,170 0 0	3,833 0 0	1,72,340 0 0	21,606	30,313	52,019
COMPARISON.									
Total for corresponding week of previous year ...	19,405	11,448 0 0	1,47,658 0	5,029 0 0	274 0 0	19,746 0 0	4,923	7,560	11,783
Per mile of railway corresponding week of previous year ...	68'00	39'83	410'16	22'30	0'76	68'94	12'14	21'00	33'14
Total to corresponding date of previous year ...	144,837	88,072 0 0	1,150,788 0	60,928 0 0	2,834 0 0	1,63,254 0 0	30,116	52,900	83,016

(a) Includes audited figures for week ending 15th January 1898.

FINANCIAL YEAR.

Approximate Statement of Gross Receipts of the Assam-Bengal Railway.

RECEIPTS FOR WEEK ENDING 19TH FEBRUARY 1898.			RECEIPTS FOR WEEK ENDING 20TH FEBRUARY 1897.			TOTAL RECEIPTS FROM 1ST APRIL 1897 TO 19TH FEBRUARY 1898.			TOTAL RECEIPTS FROM 1ST APRIL 1896 TO 20TH FEBRUARY 1897.			Total increase in 1898.	Total decrease in 1898.
Mean mileage worked.	Receipts.	Per mile worked.	Mean mileage worked.	Receipts.	Per mile worked.	Mean mileage worked.	Total receipts.	Per mile worked.	Mean mileage worked.	Total receipts.	Per mile worked.		
286	Rs. 27,808	Rs. 98'17	360	Rs. 19,746	Rs. 55'94	286	Rs. 8,84,986	.....	360	Rs. 5,70,582	.....	Rs. 3,14,394	.....

ASSAM-BENGAL RAILWAY.

Approximate Return of Traffic for the week ended 26th February 1898 on 286 miles open.

	COACHING TRAFFIC.		MERCHANDISE AND MINERAL TRAFFIC.		Other earnings (estimated).	Total earnings.	TRAFFIC TRAIN-MILES RUN.		
	Number of passengers.	Coaching receipts.	Weight carried.	Receipts.			Coaching.	Merchandise.	Total.
Total traffic for the week ...	27,076	Rs. A. P. 18,503 0 0	Mds. s. 2,39,372 0	Rs. A. P. 8,109 0 0	Rs. A. P. 353 0 0	Rs. A. P. 27,005 0 0	2,745	4,097	6,842
Or per mile of railway ...	94'07	64'91	839'06	28'35	1'10	94'42	9'60	14'32	23'92
For previous 7 weeks of half-year (a) ...	182,903	1,00,873 0 0	15,76,693 0	50,327 0 0	2,8'9 0 0	1,73,009 0 0	21,925	34,408	56,333
Total for 8 weeks ...	210,003	1,28,430 0 0	18,15,005 0	67,436 0 0	4,142 0 0	2,00,014 0 0	24,670	38,503	63,173
COMPARISON.									
Total for corresponding week of previous year ...	28,043	14,221 0 0	1,15,083 0	3,880 0 0	1,159 0 0	24,360 0 0	4,001	7,800	11,801
Per mile of railway corresponding week of previous year ...	63'54	40'86	319'67	24'56	3'30	60'02	11'76	21'66	33'42
Total to corresponding date of previous year ...	166,880	97,293 0 0	14,65,873 0	73,676 0 0	4,442 0 0	1,77,614 0 0	34,207	60,700	94,907

(a) Includes audited figures for week ending 22nd January 1898.

FINANCIAL YEAR.

Approximate Statement of Gross Receipts of the Assam-Bengal Railway.

RECEIPTS FOR WEEK ENDING 20TH FEBRUARY 1898.			RECEIPTS FOR WEEK ENDING 27TH FEBRUARY 1897.			TOTAL RECEIPTS FROM 1ST APRIL 1897 TO 20TH FEBRUARY 1898.			TOTAL RECEIPTS FROM 1ST APRIL 1896 TO 27TH FEBRUARY 1897.			Total increase in 1898.	Total decrease in 1898.
Mean mileage worked.	Receipts.	Per mile worked.	Mean mileage worked.	Receipts.	Per mile worked.	Mean mileage worked.	Total receipts.	Per mile worked.	Mean mileage worked.	Total receipts.	Per mile worked.		
286	Rs. 27,005	Rs. 94'42	360	Rs. 24,360	Rs. 68'02	286	Rs. 9,12,051	.....	360	Rs. 5,94,932	.....	Rs. 3,17,099	.....

DARJERLING-HIMALAYAN RAILWAY COMPANY, LIMITED.

							Rs.	A.	P.
Approximate earnings for the week ending 26th February 1898	...	...	...	...	...	...	10,188	0	0
Corresponding period of 1897	...	...	...	...	...	...	10,137	11	8
Increase	...	...	...	...	...	...	50	4	4
Receipts per mile for the week ending 26th February 1898	...	...	...	...	...	...	199	12	8
Ditto for the corresponding period of 1897	...	...	...	...	...	...	198	12	5
Increase	...	...	...	...	...	...	0	15	10
Receipts from 1st January to 26th February 1898	...	...	...	...	...	...	81,760	0	0
Corresponding period of 1897	...	...	...	...	...	...	86,579	0	0
Decrease	...	...	...	...	...	...	4,829	0	0

REGISTERED No. 20.]



SUPPLEMENT TO The Calcutta Gazette.

SATURDAY, MARCH 12, 1898.

OFFICIAL PAPERS.

[Non-Subscribers to the GAZETTE may receive the SUPPLEMENT separately on payment of Six Rupees per annum if delivered in Calcutta, or Twelve Rupees if sent by Post.]

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MINUTE

BY

His Honour the Lieutenant-Governor

ON THE

SERVICES OF GOVERNMENT OFFICERS AND PRIVATE GENTLEMEN IN CONNECTION WITH THE FAMINE OF 1896-97.

In a separate Resolution of this date, the history of the recent famine in these Provinces has been given, and the degree of success attained in meeting distress has been described. I propose in this Minute to mention the names of officers and private gentlemen whose services have been brought prominently to the notice of Government, but no attempt has been made to classify them in any order of merit.

COMMISSIONERS.

Mr. Bourdillon, C.S.I., was Commissioner of the Patna Division, where the brunt of the famine was felt. He administered famine relief with conspicuous ability, zeal, energy and devotion. Feeling absolute confidence in his ability and discretion, I gave him a very free hand in dealing with details, and my trust was amply justified. He never failed to keep me fully informed of all that occurred, and carried out all orders and instructions in the most loyal and intelligent way.

Mr. Forbes, C.S.I., was Commissioner of the Chota Nagpur Division, where, though the numbers on relief were never large, constant anxiety was felt owing to the extremely high prices that prevailed, and the wild and scattered character of the population. *Mr. Forbes* worked zealously and successfully, and showed resource in meeting the various difficulties of the situation as they arose.

Mr. Oldham, C.I.E., was Commissioner of the Bhagalpur Division. He met such distress as prevailed efficiently and with economy.

The Commissioners of other Divisions where distress to some extent existed, although not so acute as in the Divisions above named, also generally performed their duties satisfactorily. There was, however, some want of control in the case of the Presidency Division.

COLLECTORS.

PATNA DIVISION.

Messrs. D. Macpherson, C.I.E., and *Carlyle*, C.I.E., were the Collectors of the two most distressed districts, Champaran and Darbhanga. Both of them displayed great energy, executive ability, and devotion to duty. *Mr. Macpherson's* report on the famine in Champaran is a remarkably complete and able paper.

Mr. Hare was Collector of Muzaffarpur, and, though suffering from indifferent health, laboured incessantly and successfully. He exercised the most rigid economy without permitting the sacrifice of life. His only fault was that, feeling himself strong, he failed in some degree to keep his Commissioner fully acquainted with the circumstances of his district and his *modus operandi*.

Mr. Maude succeeded *Mr. Hare* and carried the operations to an end with complete success.

Mr. Earle was Collector of Saran, and laboured with so much devotion that his health broke down and he was invalided to Europe. He was succeeded by *Mr. Chapman*, who administered the district satisfactorily.

Messrs. Marindin and *Winsor*, who were Collectors of Shahabad, carried out relief operations in that district with judgment and economy.

CHOTA NAGPUR DIVISION.

Mr. Renny, as Deputy Commissioner of Palamau, was confronted with peculiar difficulties which he met with a fair measure of energy and success.

Mr. Herald, Deputy Commissioner of Hazaribagh, gave unremitting attention to the relief operations, which he organised with much ability.

Mr. Streatfeild, although the district of Lohardagga was not officially distressed, dealt with the difficulties due to high prices and declining food-stocks in an energetic and creditable manner.

Mr. Luson, who was in charge of the Manbhum district at the beginning of the famine operations, showed ability and energy in forecasting the requirements of the district and in making preliminary arrangements.

Mr. Maguire, who succeeded him, brought them to a successful termination.

PRESIDENCY DIVISION.

Mr. Garrett at Nadia may, owing to his strong feeling of sympathy with the distressed people, have given gratuitous relief too freely, but in spite of failing health he worked with unceasing energy and zeal, and on the whole with success.

Mr. Vincent at Khulna and *Mr. Levinge* at Murshidabad showed sound judgment and administered their districts with ability, care and economy.

BHAGALPUR DIVISION.

Mr. McIntosh administered the relief operations in the district of Bhagalpur with conspicuous success.

Mr. Carstairs, although handicapped by heavy judicial duties, maintained a thoroughly efficient control over the operations in progress.

BURDWAN DIVISION.

Mr. Manisty, Collector of Bankura, administered relief with care and efficiency.

JUNIOR OFFICERS.

The names of the following junior officers of the Civil Service, who are named in the order of seniority, have been favourably brought to the notice of Government:—

Mr. Wheeler.

„ *Ball.*

„ *Kerr.*

„ *Gruening.*

„ *Iyall.*

„ *Russell.*

„ *Lister.*

Mr. Smither.

„ *Wood.*

„ *Weston.*

„ *Sheepshanks.*

„ *Coupland.*

„ *Stephenson.*

„ *Clarke.*

Mr. Blackwood.

The Commissioned Officers whose services were lent by the Military Department did excellent work which was of the greatest value. Among them the following were conspicuous:—

Lieutenant Kaye.

The late Lieutenant Battye.

Lieutenant Cassels.

Lieutenant Hudson.

To the non-commissioned officers and men both of the British and Native Army the acknowledgments of Government are due for their excellent work, performed at the most trying time of the year, and frequently under circumstances of great personal discomfort.

PUBLIC WORKS DEPARTMENT.

Among the officers of the Public Works Department, the thanks of Government are especially due to the *Hon'ble Mr. Glass*, C.I.E., to whose friendly advice and able suggestions the Civil Department was greatly indebted, and who organised the system of works under his own department with marked ability.

Mr. Mills, as Superintendent of Works, worked with much zeal and ability.

Mr. Toogood rendered good service in the same capacity.

Among Executive Engineers, *Mr. Disney* was indefatigable and showed much efficiency.

Mr. Sealy did admirable work in connection with the Trebeni Canal.

Rai K. C. Banerjee was in charge of a difficult division, but succeeded well and was unremitting in his exertions.

Mr. Long did excellent work with great energy.

Mr. Stawell carried out the railway surveys in an expeditious and satisfactory manner.

Among the officers of the Royal Engineers whose services were lent by the Government of India, the work of the following deserves especial recognition:—

Lieutenant Close.

„ *Meyer.*

„ *Biddulph.*

Lieutenant Pridham.

Sub-Lieutenant Elles.

„ *Tillard.*

Sub-Lieutenant Freeland.

Among District Engineers, who worked as such during the famine, *Mr. Edwards*, *Mr. Robinson*, *Babu Nando Gopal Bannerjee*, *Babu Nabo Gopal Bannerjee*, and *Babu Dwarka Nath Sarkar* worked with energy and ability.

Of the Assistant District Superintendents of Police whose services were lent for famine duty, *Messrs. Boxwell* and *Bradley* deserve commendation.

The names of the following officers of the Executive Branch of the Provincial Civil Service have been brought prominently to the notice of Government:—

Mr. Piffard.

„ *Stark.*

Babu Jnan Sankar Sen.

Babu Gati Krishna Neogy.

Mr. Nitya Gopal Mukerji.

Babu Jnanendra Nath Laheri.

Mr. Devendra Nath Mookerji.

NON-OFFICIAL.

Among the non-official gentlemen who were employed as Charge Superintendents, *Mr. Still* and *Mr. Simmonds* managed their charges with marked success. *Mr. Still* was in charge of the most distressed part of Champaran and rendered very valuable service. I am under special obligation to him.

The assistance rendered by the planting community of Bihar has already been publicly recognised, and where so many came forward, seniors and juniors alike, to offer their services gratuitously to Government, at the sacrifice of much time and personal convenience, with no motive but a sense of duty and loyalty to the administration, the mention of individual names would be invidious. I desire once more to thank the whole of these gentlemen. At the outset I expressed my confidence in their willingness and readiness to help, and I was not disappointed.

The efforts of private zamindars and gentlemen in the cause of charity have been described in the report upon the famine operations for the work of the Provincial Committee of the Charitable Relief Fund. Preeminent for his liberality and personal desire that every possible relief should be afforded, stands the *Maharaja Bahadur of Darbhanga*, who was ably assisted by his Manager, *Mr. H. Bell*. The munificence of this great landowner relieved the Government of the care of a large tract of country. I inspected several of the Raj works, and was struck by the completeness of organization, and the intimate personal knowledge of the circumstances of the villages possessed by the staff. The names of the following zamindars who all to the extent of their ability rendered assistance to their tenantry, are also deserving of special mention:—

The Nawab Bahadur of Murshidabad.
The Maharaja Bahadur of Sonbursa.
The late Maharani Surnomoyee of Murshidabad.
The Maharani of Bettiah, through her Manager, Mr. Lewis.
The Maharani of Hatwah, through her Manager, Mr. Buskin, and his assistant, Babu Bepin Behari Bose.
Raja Ram Ranjan Chakravarty Bahadur of Hetampur.
The Raja Bahadur of Banaili.
Raja Thakuraj Bhagwat Dyal Singh of Chairpur.
Rani Makhan Kumari of Lachmipur.
Rani Kesobati Kumari of Hendue.
Rai Thakuraj Gobind Prasad Singh Bahadur of Ranka.
Rai Ganpat Singh Bahadur and his brother Babu Narpal Singh.
Hon'ble Justice Chandra Madhab Ghose.
Mr. Grant.
Babu Hari Charan Chandra of Nakipur.

SECRETARIAT.

The officer who above all others deserves credit for his work in connection with the famine is the Revenue Secretary to Government, the *Hon'ble Mr. M. Finucane, C.S.I.* Not only has he carried on almost single-handed the vast mass of correspondence connected with the operations, but his knowledge of Bihar, and of the agricultural conditions of both Bihar and Bengal, his intimate acquaintance with the histories of past famines there and elsewhere, his fertility of resource, and remarkable power of work, have been simply invaluable to me, as they were to my *locum tenens*, the *Hon'ble Mr. C. C. Stevens, C.S.I.* I tender to Mr. Finucane my heartfelt thanks for his unceasing and unselfish devotion and assistance.

Mr. Konstam, as Under-Secretary in the Revenue Department, rendered much good service and gave Mr. Finucane all the assistance in his power.

My acknowledgments are also due to the Secretariat Establishment and the Press, both of which were frequently working under great pressure.

A. MACKENZIE.

FINAL RESOLUTION OF THE GOVERNMENT OF BENGAL ON THE
FAMINE OF 1896 AND 1897.

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REVENUE DEPARTMENT—AGRICULTURAL (FAMINE).

FINAL RESOLUTION No. 385

OF THE FAMINE IN BENGAL OF 1896-97.

Calcutta, the 11th March 1898.

READ—

Final reports on relief operations, submitted by the Commissioners of the Patna, Bhagalpur, Chota Nagpur, Burdwan, Presidency, and Orissa Divisions, and by the District Officers of the several affected districts.

A note by the Chief Engineer, dated the 22nd February 1898, on the relief works conducted under the Public Works Department.

Notes by the Inspector-General of Civil Hospitals, the Sanitary Commissioner, and the Commissioner of Excise relating to the famine.

Report from the Provincial Committee on the administration of the Indian Famine Charitable Relief Fund in Bengal.

Read also—

Correspondence relating to the organisation and progress of famine relief, and minutes of the conferences held from time to time.

An account is given in the following narrative of the famine which visited the Lower Provinces of Bengal during the years 1896 and 1897. The total area of these Provinces, excluding Tributary and Native States, is 151,535 square miles, with a population, according to the Census of 1891, of 71,346,961 souls—a population equal to nine-tenths of that of the North-Western Provinces and Oudh, the Punjab, and the Central Provinces put together. Though the pressure of high prices, due to the short outturn everywhere of the crops of 1896 and to the general distress in other parts of India, caused suffering throughout the vast extent of these Provinces, to all who were dependent on small fixed incomes, to the labouring classes, and to those who subsist in ordinary times on private charity, distress amounting to famine was officially declared to exist in an area of 27,981 square miles only, with a population of 13,245,000 souls, as detailed below :—

Districts.		Area of the district.	Total population of the district in thousands.	Total area distressed.	Population of the distressed area in thousands.
1		2	3	4	5
		Sq. miles.		Sq. miles.	
PATNA DIVISION	{ Shahabad	4,373	2,060	1,632	383
	{ Saran	2,616	2,466	2,327	2,253
	{ Champaran	3,531	1,860	3,230	1,659
	{ Muzaffarpur	2,704	2,713	2,667	2,307
	{ Darbhanga	3,336	2,803	2,940	2,416
	Total	16,899	11,901	12,846	9,219
BHAGALPUR DIVISION	{ Bhagalpur	4,226	2,033	500	326
	{ Sonthal Parganas	5,470	1,754	1,321	377
	Total	9,696	3,783	1,821	703
CHOTA NAGPUR DIVISION	{ Hazaribagh	7,021	1,164	1,759	201
	{ Palamanu	4,912	696	4,912	696
	{ Manbhum	4,147	1,113	3,373	691
	Total	16,080	2,953	10,033	1,787
BURDWAN DIVISION	Bankura	2,621	1,070	1,063	413
PRESIDENCY DIVISION	{ Nadia	2,793	1,844	1,132	623
	{ Khulna	2,077	1,177	474	276
	{ Murshidabad	2,143	1,261	205	120
	Total	7,013	4,072	1,861	1,023
ORISSA DIVISION	Puri	2,472	945	366	103
		54,781	24,727	27,981	13,245

THE FAMINE OF 1874 AND SCARCITIES BETWEEN THEN AND 1896-97.

The last great famine that visited these Provinces was that of 1873-74, and since then there have been four years of local scarcity.

In 1873-74 severe distress prevailed throughout an area of 20,950 square miles, with a population of 10,700,000, and to a less extent distress in an area of 19,159 square miles, with a population of 7,064,830. The districts of Hazaribagh, Palamu, Khulna, and Puri, in all or parts of which famine prevailed last year, were not affected in 1873-74, while on the other hand, among districts which escaped during the recent famine, Purnea, Dinajpur, Rangpur, and Bogra suffered severely in 1873-74, and Monghyr, Gaya, Malda, Rajshahi, Pabna, Jalpaiguri, Burdwan, and Birbhum in a lesser degree. With these exceptions the other districts affected during 1873-74 were again visited by famine in 1896-97.

In 1875-76 the early cessation of the rains caused a serious failure of the rice crop over a considerable area in Dinajpur, throughout the Sitamarhi and Madhubani subdivisions of Tirhut, and in the extreme north of the Supaul subdivision in the district of Bhagalpur, although relief operations were eventually found necessary only in the Madhubani and Supaul subdivisions.

The next year of deficient rainfall and short crops was 1885-86, when anxiety was felt with regard to certain parts of the districts of Bogra, Nadia, Murshidabad, Malda, Gaya, Patna, Burdwan, Birbhum, and Bankura, but eventually relief operations were undertaken in an area of about 1,000 square miles only in the districts of Bankura, Burdwan and Birbhum. On these operations, which lasted from May till November 1885, a total expenditure of Rs. 1,96,000 was incurred, the highest number in receipt of relief at any one time being 22,172 at the end of June.

The rainfall of 1887-88 was unfavourably distributed throughout the Province, and pressure was felt almost everywhere. The chief seat of distress was a strip of some 1,000 square miles in area, extending along the Nipal frontier through the districts of Champaran, Muzaffarpur, Darbhanga, and the Supaul subdivision of Bhagalpur. The deficiency of rainfall during the important months of September and October caused a serious failure of the winter rice crop, while the cold-weather crops were poor. Relief operations were commenced early in January, and at the worst period of distress in the end of May the numbers on relief were about 46,000. The rainfall when it came was excessive, causing floods which aggravated the situation, and the last relief centres were not closed till the end of October. The total expenditure on relief works and gratuitous relief from Government and district funds, including some operations on a small scale in the districts of Gaya and the Sonthal Parganas, amounted to about Rs. 5,00,000, and about Rs. 1,50,000 was spent on relief by private individuals, mostly by the Darbhanga Raj. There was some distress also requiring relief in the Tributary Mahals of Orissa and in the districts of Balasore, Midnapore, and Murshidabad.

The last scarcity preceding the famine of 1896-97 which necessitated State relief, was that of 1891-92, when the irregularities in the monsoon during September and October 1891 and the absence of the winter rains caused much damage to the winter rice and *rabi* crops. Relief operations were conducted from January to August in parts of the districts of Muzaffarpur, Darbhanga, Monghyr, Bhagalpur, Purnea and Dinajpur, comprising a total area of 5,710 square miles, with a population of 2,531,555 persons. The largest numbers on relief on any one day in the several districts amounted to 83,016 on relief works and 4,699 on gratuitous relief, and the total cost of the relief operations amounted to Rs. 4,84,113.

In 1895-96 the rice crop was again short, in the Patna Division especially, but Government relief was not found to be necessary.

The famine of 1896-97, in its main features—in its causes, extent, intensity, development, and in the rise and fall of numbers in receipt of State relief—resembles to a great extent the famine of 1873-74, but here the analogy ceases: the methods adopted for relieving distress, the cost, and in a large degree the moral effects on the people, of the operations of 1896-97 have been largely different from those of the famine of 1873-74. In both famines alike the paramount object of all famine relief, administration, namely, the saving of human beings from death by starvation, has been fully attained, but on the present occasion at a greatly reduced cost, aggregating only a sixth part of that incurred by the State in 1873-74.

If in this narrative comparisons are instituted between the methods and results of the administration of famine relief in 1873-74 and those of 1896-97, and conclusions are drawn that may appear favourable to the methods and results of the recent operations, it is not because it is claimed that the administrators of to-day are superior to their predecessors, to whom belongs the credit of showing for the first time how a widespread Indian famine could be successfully grappled with; but because the inferences are suggested that, as the results of the experience of 1873-74 and subsequent famines, of the labours of the Famine Commission, and of the more minute knowledge of the agricultural economy of the country since attained, greatly-improved methods of famine administration have been devised, and that, owing to the extension of railways, spread of communications, and the general advance of these provinces in material prosperity, the powers of the people to resist the effects of calamity of seasons have largely increased. It is with a view to call attention to and emphasise these inferences that comparisons will be made on suitable occasions in the following narrative between the famines of 1897 and 1874. Though the administrators of famine relief in 1874, in a great undertaking of unprecedented character, with no previous experience to guide them, may have committed mistakes and erred on the side of excessive liberality, they were at all events conspicuously successful in saving life, and left behind them traditions among the people of confidence in the will and power of Government to rescue them from the horrors of starvation. The administrators of to-day had the advantage of the experience of 1874 and of subsequent famines; and if it be true that equal success has been attained in saving life at a smaller cost, it should be always remembered, as Sir Richard Temple remarked at the time, that many things had then to be accomplished, the like of which had never been attempted before. Nothing can be more pleasing to those who were responsible for the administration of relief in 1874, than to find that a failure of crops equal to that of 1874, resulting from an equal deficiency and more unfavourable distribution of rainfall, and attended by higher prices of food-grains, was met in 1897 by an outlay of little more than one crore of rupees, against one of six crores in 1874, as nothing would be more agreeable to Sir Alexander Mackenzie and those who have shared with him in the labours of the famine of 1897, than to learn 20 years hence, in the event of the occurrence of a similar calamity of season, that in the interval between the present and that time the material prosperity of the people had so advanced that the calamity had been met by an outlay of one-sixth of that incurred in the recent famine. Indeed, the Lieutenant-Governor sees in the events of the past year reason to hope that Bengal, Bihar, and Orissa may have now seen the last of the great famines. If with a failure of crops, which, according to all authorities possessing personal knowledge of these provinces (and who alone are in a position to form a judgment in the matter) was as great as any of this century, and with unprecedentedly high prices, human life has been saved throughout the vast territories subject to the Lieutenant-Governor of Bengal, at an outlay of one crore of rupees to the State, the Lieutenant-Governor thinks it is not too much to expect, as time goes on, and the condition of the people of these provinces continues to improve, as it undoubtedly has improved in the past quarter of a century, that they will be able to meet any calamity that is ever likely to occur in the future with an increasingly diminished expenditure from State funds.

CHAPTER I.

THE ECONOMIC CONDITION OF THE AFFECTED TRACTS.

IN order to understand the effects of any given degree of crop failure in a particular area, it is clearly necessary that regard should be had to the normal economic condition of the people of that locality.

It was the Patna Division, with its area of 23,691 square miles and population in 1891 of 15,815,121, mainly agricultural, with an average density of 667 persons to the square mile, including hills, jungles and waste, or 943 to the square mile, on the average cultivated area of the last five years, in which the most acute distress was felt. The Division is separated by the river Ganges into two parts of almost equal area, the three districts of Patna, Gaya, and Shahabad forming what is generally known as South Bihar, while the four districts of Saran, Champaran, Muzaffarpur, and Darbhanga constitute North Bihar. This great Division extends over an area nearly equal to half of England, and has a population almost as large as that of the whole of the Bombay Presidency, and 50 per cent. greater than that of the whole of the Central Provinces or of Ireland, Scotland and Wales put together. The greater part of this area is a highly cultivated alluvial plain rising into wooded hills on the south, where it is bounded by the outlying ranges of the Chota Nagpur plateau, and on the north sloping gently upwards to the foot hills of the Himalayas. Besides the Ganges, and in addition to streams of less importance, three great rivers pass through the Division—the Sone on the south, and the Gogra and Gandak on the north. In ordinary conditions of favourable rainfall, the Division, excluding the tracts of hill and forest, is a region of extraordinary fertility inhabited by some of the most industrious husbandmen in India. In all districts of this Division, though of varying importance in each, three harvests are reaped in the year. The rain crops, known as *bhadoi*, including some kinds of rice, maize, and many of the millets; (2) the main winter rice or *ughani* crop; and (3) the cold-weather or *rabi* crops, comprising the principal cereals of Northern India, such as wheat, barley, and oats, and pulses; oilseeds, sugarcane, tobacco, and cotton form valuable crops, which are also extensively cultivated. In North Bihar, and to a small extent south of the Ganges, indigo cultivation gives employment to thousands of labourers, and brings large sums of money into circulation among the cultivators, while poppy is largely grown everywhere, except in Darbhanga, on a system of advances made by Government.

In spite of these advantages, the material condition of the people in Bihar generally is considerably below what it is in other divisions of the Lower Provinces.

Economic condition of the Patna Division.

Wages are low, rents high, and population, under the favourable influences of universal early marriage and a comparatively salubrious climate, extremely dense, and, owing in a great measure to its density, poor and badly fed. The population is almost entirely agricultural, while holdings are small and greatly subdivided, resulting in a large class of agricultural poor, who supplement the profits from their petty holdings by working for hire, and thus swell the ranks of the labourers for wages. The brunt of the famine of 1896-97 fell upon the four districts of North Bihar, especially the northern rice-growing subdivisions of Champaran, Muzaffarpur, and Darbhanga, along the line of the Nipal frontier. This is the zone which was described by Sir Richard Temple as the "blackest of the black spots in the famine map." In 1880 the Famine Commissioners, speaking of the people of North Bihar, described them as "a tenantry very ignorant, very helpless, sunk in the most abject poverty," while, again in 1882, the Government of India in a despatch to the Secretary of State remarked that "the evidence before us of the depressed and precarious condition of the people in

that part of the country is full and conclusive." Sir Antony MacDonnell in 1893 wrote of this tract:—

"Distress, rumours of distress, and starting of relief work, are ever-recurring characteristics of the local officers' annual reports. In the year under review (*i.e.*, 1892-93), owing to widespread failure of the preceding year's rice and *rabi* crops, relief works had to be opened in the second week of March in Darbhanga and Muzaffarpur. By the middle of May no less than 22,000 people were on these relief works in Darbhanga and 6,300 in Muzaffarpur, while by the end of the first week of June the numbers rose to 43,470 in the former and 14,147 in the latter district. Had the rains of 1891-92 not been favourable as they happily were on the whole, 'there is no doubt,' Mr. Forbes (the Commissioner) remarks, '*that famine would have at once crushed down upon these districts.*' The material condition of the people in Darbhanga and Muzaffarpur, especially during the first few months of the year, was, the Commissioner says, reduced to a low ebb, and *their physical condition fell off in a marked degree; and this, Mr. Forbes adds, was particularly noticeable among the children.* Though there were no deaths reported from actual starvation, the morality among the old and infirm necessarily increased for want of proper nutrition. The Collector of Darbhanga, Mr. Williams, says:— 'There can be no doubt that had the authorities not come to the rescue, the deaths from actual want of food would have been numerous.'"

As shown in the preceding paragraphs, there has scarcely ever been a year of distress or scarcity in any part of these provinces during which North Bihar did not suffer. It suffered badly in 1866 and 1874, and in a lesser degree in 1875-76, 1885-86, 1887-88 and 1891-92, the intervening years of distress preceding the present famine. But though the material condition of the people in Bihar was, as described by Sir Richard Temple to the Famine Commission, lower in his time than that of any part of India that he had seen, and though their condition still gives and must, for some time to come, continue to give ground for anxiety, yet much has been done to improve it since Sir Richard Temple's day. In 1874 only one railway (the East Indian) passed through the Division south of the Ganges: roads either did not exist or if they did exist were rough and unbridged; there was little or no irrigation from canals; tenants' rights were insecure, and oppressions and abuses of various kinds were rampant. Now there is not a single district and scarcely a subdivision of a district in the Division which is not served by railways; excellent roads ramify everywhere, tenants' rights have been secured by the operation of the Tenancy Act, and the knowledge of their rights is being brought home to the cultivators by means of the record of rights, which is approaching completion; some canals have been made, and what was for these causes *a priori* likely, namely, that the power of resisting the effects of crop failure should have increased, has been proved to be a fact by the events of 1897 narrated in the following chapters. But notwithstanding these improvements the position of the people of these parts being still precarious, it is not surprising in a year of abnormal rainfall and resultant crop failure, following, as in the recent famine, upon a year of seriously short crops, that a considerable portion of the population were unable to fall back upon the accumulated stocks of previous years to tide them over the temporary crisis. This, however, is a subject which will be treated more at length in the next chapter.

The economic condition of the distressed areas is described more in detail in the following paragraphs of this chapter:—

The only districts of Bihar which escaped the stress of famine were those of Patna and Gaya.* In Patna the rainfall

• PATNA—
Area, 2,075 square miles.
Population, 1,772,852

GAYA—
Area, 4,712 square miles.
Population, 2,193,331.

South Bihar. In Patna the rainfall was not so deficient as elsewhere, while the whole of the western border of Gaya is protected by the Sone Canals, from which in 1896-97 some 53,000 acres were irrigated. Similarly, on the western border of Patna, some 54,000 acres were irrigated from the Sone Canal system. Elsewhere in Gaya and in the Bihar subdivision of Patna, the country is intersected with streams flowing from the Chota Nagpur plateau, the water of which, with the natural rainfall and drainage, is conserved in an elaborate system of *ahars* or reservoirs, to be subsequently conducted through a network of channels to the fields. Communications in both districts have been greatly improved since 1874, and are now excellent, and the fears which were at one time entertained regarding certain local areas in the Patna and Gaya districts, eventually proved groundless, no relief measures being found

necessary except among the beggars and pilgrims who came from elsewhere and were found wandering along the Grand Trunk Road.

The rain failure in Shahabad* was greater than in Patna or Gaya, but

* SHAHABAD—
Area, 4,873 square miles.
Population, 2,000,579.

the Sone canal system protects the greater part of the Sasaram subdivision, the south of the Buxar subdivision, and much of the Sadar. Moreover, these parts of Shahabad contain a substantial and sturdy yeoman tenantry, known as *gusasthads*, who have always been tenacious of their ancient agricultural rights and customs, and have succeeded in maintaining them. Eventually no portion of this district turned out to be actually distressed except the extreme south-west corner, comprising the Bhabua subdivision and a part of that of Sasaram. The whole of the southern part of the Bhabua subdivision, and much of the southern portion of Sasaram is occupied by the Kaimor range of hills, an undulating plateau, for the most part covered with forest, with an area of 700 square miles and about 20,000 population. There is little provision here for water-supply, and the crops are poor and precarious, depending almost entirely on the rains. Food-supplies have to be brought up from the plains through difficult passes, which, always impassable for wheeled traffic, become closed even to pack animals when the monsoon once sets in. The remainder of the distressed tract in this district comprised the plains part of the Bhabua subdivision and the Chenari outpost in Sasaram. Of this, the portion falling north of the Grand Trunk Road was not severely affected, but distress was much more acute in the portion south of the Grand Trunk Road, between it and the hills, where the rice was almost a total failure, and there is little or no irrigation. The people, too, are inexperienced cultivators and of poor physique.

Of the four districts of North Bihar, Saran† is the most densely populated and closely cultivated. It is a fertile triangle of rich alluvial soil washed on two sides by the Gogra, Ganges, and Gandak. It possesses a system of canals, so called, which are of little practical value, but it is pitted with numerous wells which are largely used for irrigation by an adroit and industrious husbandry. Its crops are divided almost equally among the three great harvests of the year, and a total crop failure is therefore practically impossible. It is always an importing district, and the bringing in of outside grain is an operation well understood by the local merchants, while the home remittances of its numerous inhabitants who migrate in the winter months in search of employment, and the money circulated by opium and indigo cultivation, increase the staying power of its inhabitants. Under these circumstances general distress was averted, and what distress there was varied according to the local conditions of the tracts affected, being severe where the rice crop predominated and less acute where *rabi* and *bhadai* crops were more extensively grown. The distress was worst in the Gopalganj subdivision, but about two-thirds of the Siwan subdivision and half the Sadar subdivision were also badly affected.

Practically the whole of the Champaran‡ district was affected. The eastern and southern portions of the district are fairly fertile, but the northern and western portions are thinly populated, and contain a large proportion of hill and jungle. The normal rainfall is high, and the raiyats are averse to adapting themselves to the needs of irrigation in periods of drought. The prevalence of fever and malaria has also lowered the general standard of physique. The worst affected areas were a tract roughly corresponding to the Dhaka thana, where the failure of the rain was more complete and rice the principal crop; and a tract of about 430 square miles in the north-west of the Bettiah subdivision, around Ramnagar and including the thanas of Bagaha and Hardih. The population in the latter area is scanty, the soil poor, and the cultivators thriftless and ignorant. Communications in the district as a whole are not so good as

† SARAN—
Area, 2,656 square miles.
Population, 2,461,065.

‡ CHAMPARAN—
Area, 3,531 square miles.
Population, 1,859,465.

elsewhere, and about Ramnagar are specially deficient. This tract was the last in the district to recover.

The Muzaffarpur* district is an alluvial tract of great fertility, especially in the southern subdivision of Hajipur, and much irrigation is possible from streams which cross it diagonally from north-west to south-east. Its weakness lies in the concentration of the rice cultivation in the Sitamarhi subdivision and north of the district generally, to the exclusion in great part of other crops which might be relied on should the rice fail. The whole district was affected by distress except the extreme south of the Hajipur subdivision, where the rainfall was heavier and the soil is fertile, *rabi* and *bhudo* crops being extensively grown, and the general class of cultivators very industrious. The portions worst affected were the Sitamarhi subdivision and the northern half of the Sadar subdivision, where rice is the preponderating crop and the failure of it was a more serious matter than where other crops are also cultivated. Strips along the Adhaura, Lakhandai, and Bagmati rivers were saved by irrigation, but the rest of the Sadar subdivision and the north of the Hajipur subdivision also suffered severely.

The Darbhanga† district is in many parts the counterpart of Muzaffarpur, although the proportion of rice land is greater. In the Samastipur subdivision to the south, there is a tract of great fertility, comprised in the Dalsing Serai and Samastipur thanas, which received almost its normal rainfall, like Hajipur to the west of it. North of this the distressed area commenced, comprising, with the exception of a few isolated areas, the whole of rest of the district and the Sadar and Madhubani subdivisions. As in Muzaffarpur, the great rice tracts lie to north, and here the distress was most conspicuous and serious.

Throughout North Bihar the roads are numerous, and were greatly extended and improved by the famine relief operations of 1874, and since then by the operations of the District Boards, Champaran being the only district which leaves much to be desired in this respect. The Bengal and North-Western Railway in Saran and the Tirhut State Railway in the other districts bring most areas within moderately easy reach of the line, the tracts which are worst provided for being the extreme north-west of Champaran and the north of the Madhubani subdivision and south-east of the Sadar subdivision in Darbhanga. The Gandak and Gogra afford a waterway for the ordinary country boats, and as a whole the state of communications is excellent.

Communications in North Bihar generally.

Coming now to the adjoining Division of Bhagalpur, the distressed areas were limited to the districts of Bhagalpur and the Sonthal Parganas.

Bhagalpur Division.

The district of Bhagalpur‡ is divided naturally by the river Ganges into the North Gangetic and South Gangetic tracts.

§ BHAGALPUR—
Area, 4,226 square miles.
Population, 2,032,696.

To the south of the river, although distress was at one time apprehended in certain local areas and test-relief works were opened in April and May, they failed to show any demand for labour, and eventually what distress there was, was met by expenditure from charitable funds. North of the river the distress was more acute, and relief operations on a considerable scale were required in a tract of some 500 square miles, with a population of 325,000, situated partly in the Supaul and partly in the Madhipura subdivisions; the distress was most severe on the western border of the district adjoining Darbhanga. This is the old famine area of the Bhagalpur district; the soil is poor and winter rice the chief crop, while indigo cultivation, at one time extensive, has practically died out. The social conditions are peculiar; the variety of castes among a population wholly agricultural is small, and the bulk of the cultivators are Maithili Brahmans and Rajputs, who will not work themselves and look to the low-caste Jolahas and Musahars as day-labourers for the cultivation of their fields. Alms they will not accept, and while clamorous for loans, they made it a complaint that their labourers had gone elsewhere to earn wages they could no longer themselves afford to give.

In the Sonthal Parganas* two tracts in the south-west of the district were declared affected, the one in the Jamtara subdivision—covering some 367 square miles, with a population of 93,000, and the other the whole of the Deoghur subdivision, comprising 954 square miles and a population of 284,114. The country is undulating, with fertile valleys interspersed with uplands of poor soil and forest, and the streams which traverse it are mere mountain torrents. The population, largely aboriginal, with a marked aversion for regular work, subsists almost wholly on agriculture, the all-important crop being the winter rice; spring crops are of small importance, and the *bhadoi* crops are in less proportion than elsewhere. Outside these areas distress in the Damin tract of the Rajmahal subdivision, and in the Godda subdivision generally, was met by charitable relief only.

In the Chota Nagpur Division, with an area of 26,966 square miles and a sparse population of about 4,500,000 souls, the three districts of Palamau, Manbhum, and Hazaribagh were severely affected. In Lohardaga, though never officially declared affected, relief operations on a small scale were carried on for a few months, and test works were opened in Singhbhum, but were not attended in any numbers. The physical aspect of the division as a whole is that of an area broken with hills, rising in places to 4,000 feet and more above sea-level, and interspersed with cultivated valleys of more or less fertility. The centre of this area is occupied by the Ranchi plateau, an undulating table-land about 4,500 miles in extent, and at an elevation of 2,100 feet. From this, except to the west, where the high lands run on into the Native States, there is a general fall in the level of the country. To the north, after an abrupt fall to the valley of the Damodar, the level rises to the Hazaribagh plateau, a similar, though smaller, table-land of about 600 square miles in extent. To the north-west lies the district of Palamau, a tangled mass of broken hills and more or less open valleys. To the east and south lie the districts of Manbhum and Singhbhum. The northern and eastern portions of Manbhum are open, and consist of a series of rolling downs; to the south and west the country is more broken, though generally the district lies lower than either Lohardaga, Hazaribagh, or Palamau. In Singhbhum, too, to the north and east of the district the elevation is smaller and the country fertile; on the south the country rises to an extensive elevated plateau, 1,000 feet above sea-level, while to the west lies a wild mountainous tract inhabited for the most part by aboriginal tribes.

The railway and other communications throughout this vast area are generally poor. The Bengal-Nagpur Railway bisects the Manbhum district and passes through that of Singhbhum, while branch lines of the East Indian Railway tap the Gobindpur subdivision of the Manbhum and the Giridih subdivision in Hazaribagh. The rest of the Division is completely isolated, Ranchi in Lohardaga and the station of Hazaribagh being each 75 miles from the line of rail, and Daltonganj in Palamau 100 miles from the nearest station in Gaya. Internal traffic is for the most part carried on by bullock cart and pack-bullocks over rough country roads. About two-thirds of the population subsist on agriculture, and about one-sixth are unskilled labourers, known locally as *Kamias*, many of whom are practically serfs. They are especially numerous in Manbhum. Cotton-spinning and weaving, and in the Giridih and Gobindpur subdivisions, coal-mining, give employment to a considerable section of the population.

Taking the Division as a whole, the rice crop yields about two-thirds of the food-supply, the *bhadoi* crops about one-fourth, and the *rabi* crops not more than one-twelfth with varying proportions in individual districts. A considerable part, however, of the food-supply consists in the edible forest products, which are resorted to largely everywhere as a supplement to the ordinary diet. The most important of these products is the flower of the *mahua* tree, but a large variety of jungle fruits and roots are eaten both cooked and raw. This diet, though sufficient to sustain life, is deleterious if unaccompanied by rice or other grain, yet the aboriginal and semi-aboriginal tribes, who form a considerable portion of the population, are content to eke out a

scanty subsistence upon it in their native jungles rather than do anything in the nature of a "task" upon relief works. Consequently, though the numbers on relief in the Division were at no time large, there was more anxiety felt on its account than elsewhere. The inaccessible character of the country and the range of prices, which here reached a higher level than in any other portion of the Province, combined with the scattered character of the population and the restless and independent nature of the forest tribes, gave rise to grave fears lest the food-supplies should fail and the people die in the jungles rather than resort to the relief works; and although only a few actual deaths from starvation are reported to have occurred, yet there is reason to apprehend that the sufferings of the poorer classes have been greater in this Division than elsewhere.

The area of the affected tracts in Hazaribagh* extended to about 1,750

* HAZARIBAGH—
Area, 7,021 square miles.
Population, 1,164,321.

square miles, or about a quarter of the district, with a population of about 200,000. Irrigation exists on a very small scale, and the crops depend

almost entirely upon a favourable distribution of the rainfall. Even in ordinary times the economic condition of the tract is not much raised above the boundary line between comfort and distress. Road communications are good, but importation of grain is not resorted to to an appreciable extent, high prices being the immediate result of any failure of the local food-crops.

In the Palamau† district the most distressed area covered about

† PALAMAU—
Area, 4,912 square miles.
Population, 595,770.

2,563 square miles, with a population of 383,440 souls, and was comprised in a broad tract running from east to west through the centre of the

district; to the north and south the distress was less acute. Trade is mostly local and with surrounding districts, and on a petty scale, while communications are exceptionally poor, communication by railway, water, or metalled roads being alike non-existent.

In Manbhum‡ the whole district, with the exception of two thanas, was

‡ MANBHUM—
Area, 4,147 square miles.
Population, 1,193,328.

affected, or an area of 3,373 square miles and population of 991,097. The affected tracts are all agrarian, and one-fourth of the population is dependent

on unskilled labour, the class who are the first to suffer when prices rise. The soil of the up-lands is for the most part hard, dry, ferruginous gravel, with good fertile alluvial soil in the lower levels. Though in ordinary years in the Gobindpur subdivision and in the Jhalda thana in the Sadar, there is a considerable business in coal and lac, the people for the most part depend upon the produce of their fields.

In the Burdwan Division only one district—that of Bankura§—was

Burdwan Division.

§ BANKURA—
Area, 2,621 square miles.
Population, 1,069,668.

affected, where the distressed area comprised 1,053 square miles, with a population of 413,000. The country affected was for the most part undulating hill and jungle, resembling the adjoining district of

Manbhum. The population is poor, comprising many Sonthals, although in Raipur thana there are a good many substantial Utkal Brahman raiyats, who will do no field-work themselves. Road communications are generally fair, except in Raipur thana. The only considerable food-crop is the winter rice.

In the Presidency Division famine was declared in parts of the districts

Presidency Division.

of Nadia, Khulna, and Murshidabad. Although gratuitous and charitable relief was distributed and

a few small works opened for a short time in the district of Jessore, distress was never officially declared there.

In the district of Nadia|| the portion known as the Kalantar was the

|| NADIA—
Area, 2,793 square miles.
Population, 1,644,108.

first affected, and subsequently the Meherpur subdivision and the western portions of the Kushtia and Chuadanga subdivisions. The total distressed area covered some 1,182 square miles, containing a

population of 625,840, while in the famine of 1873-74 distress had been practically confined to the Kalantar, or 528 square miles. In the affected area two classes of soil are clearly marked: the low level areas of black clay soil, subject to inundation and bearing the *aman* paddy, and the high level areas of light sandy soil, growing *aus* paddy and *rabi* crops. For the

district as a whole, the early or *aus* paddy is of far more importance than the winter rice. Practically the whole population live on the land. As a body they are poor and indebted, dependent for their food-supply on their own stocks and on petty *banyas*. There is no grain trade on a large scale, and importation is hampered by bad communications. A bad system of land tenure known as *utbandi* prevails, under which system the cultivators are mere tenants-at-will. They change the lands they cultivate at pleasure from year to year, pay rent only for the plots they may choose to cultivate, and acquire no occupancy rights in them.

In the famine of 1873-74 the affected area in the district of Murshidabad* had lain in a tract west of the Bhagirathi, known as the *Rarh*, where winter rice is almost the only crop grown, but during the recent famine distress prevailed chiefly on the east of the Bhagirathi, with only a narrow strip in the Kandi subdivision on the west. The chief crops here are the early rice, followed by a cold-weather crop, but in the Kalantar in the south-east of the district, which is liable to floods, the winter rice is the only crop. The total extent of the affected area was 205 square miles, with a population of 120,000.

* MURSHIDABAD—
Area, 2,143 square miles.
Population, 1,260,946.

The affected area in the district of Khulna,† comprising 474 square miles, with a population of 276,000, lay almost entirely in the Satkhira subdivision and in the Paikgacha thana in the Sadar subdivision. The feature of this part of the country is the network of tidal rivers and channels which intersect it in every direction. The river Jamuna with its continuation, the Kalindri, and the Kolpetua, and the Kabadak, with their tributaries, all traverse this part of the country and debouch into the Bay of Bengal, with numerous tortuous water-ways as connecting links between them. From December to the end of June as a rule the river water remains salt, but after the rains have set in, the salt water is usually driven beyond the limits of cultivation by the volume of the fresh rain water and drainage coming down. In a year of abnormally short rainfall, on the other hand, the river water remains more or less salt throughout the rains, with most prejudicial results to the winter rice crop. The river banks are almost invariably higher than the country they enclose, and are cut by numerous little inlets by which the water penetrates to the lands within. With the rising of the spring tides in January it becomes necessary to dam up these inlets and surround the cultivated lands with embankments sufficiently high to keep out the incursions of the tides. When with the coming of the rains the river water becomes sweeter, it is usual to admit it by the removal of the dams. For the cultivation of the rice crop two things are essential—dams and embankments of sufficient strength to keep out the salt spring tides, and sufficient rainfall to sweeten the rivers at the end of June that their water may be used for irrigation. Khulna has usually been regarded as a district safe from famine, but an unusual combination of adverse circumstances produced partial local distress in 1896-97. Unfortunately the inhabitants are mostly illiterate and improvident; the zamindars are absentees and generally indifferent, while the subordinate tenure-holders are small men and impoverished. Embankments were permitted to go out of repair, thus allowing salt water to percolate into the fields to the gradual deterioration of the soil, while in 1895 a storm-wave swept over the distressed tract, leaving a deposit of saline matter which the short rainfall of 1896 was not sufficient to wash out. The result was a failure of the winter rice crop, which is practically the only staple of the population, of whom about 80 per cent. are agriculturists.

† KHULNA—
Area, 2,077 square miles.
Population, 1,177,652.

Although distress was at first apprehended in several parts of Orissa, relief operations were ultimately confined to a tract of some 365 square miles, with a population of 102,000, round the Chilka lake, and to scattered areas in the Khurda subdivision in the district of Puri.‡ The soil round the Chilka lake is sandy, and grows only one crop (winter rice), while the people are always more or less in straits. It was here that the famine of 1866 first made its appearance.

Orissa Division.

‡ PURI—
Area, 2,472 square miles.
Population, 944,998.

CHAPTER II.

CAUSES OF THE FAMINE OF 1896-97.

Normal crop distribution in the Province.

As observed in the preceding chapter, the principal harvests in these provinces are—

- (1) The *bhadoi*, consisting principally of *aus* (early rice) in Bengal Proper and Orissa, and of *makai* (Indian-corn), millets, and early rice to a less extent, in Bihar and Chota Nagpur. This harvest, sown in April, May, and June, is reaped in August and September.
- (2) The *aghani* or *hymanti*, consisting of the great winter rice crop, reaped in November, December, and the beginning of January.
- (3) The *rabi*, consisting of *boro* or spring rice and pulses in Bengal Proper and Orissa, and of wheat, barley, and pulses in Bihar, sown in October and November, and reaped chiefly in March, April, and May.

The statistics of estimated areas under the different crops in Bengal are to be accepted with some reservations. There does not exist in these provinces any village agency through which, as in temporarily settled Provinces, what purport to be accurate and complete returns of village cultivation can be compiled, and the figures of areas as published are based upon the rough estimates of District Officers, framed upon what local knowledge is available. Information as to areas annually cropped and as to outturn is obtained mainly through the medium of the police, private individuals being also asked for information. In estimating normal areas every available source of information is utilised, such as economic reports, statistics of estates cadastrally surveyed, statistics of consumption, trade, etc. Annual estimates of areas are prepared with reference to the standing normal estimates, allowance being made by the local officers for estimated increase or decrease due to the character of the season. The returns of District Officers are finally compiled and scrutinised before publication by the Agricultural Department. A similar system of estimating crops prevails in the United States of America. The figures, while being the best possible, may be taken as approximately correct, but they are not, and do not pretend to be, absolutely accurate. According to the latest returns of the Agricultural Department, the normal areas under the different crops in the Province as a whole are as follows:—

<i>Bhadoi</i> —		Aores.	Aores.
Food-crops	...	13,001,500	16,632,500
Non-food-crops	...	3,631,000	
Winter rice	...	...	32,101,000
<i>Rabi</i> —			
Food-crops	...	12,455,700	18,509,600
Non-food-crops	...	6,053,900	
Total cropped area		...	67,243,100

The percentages on the total normal cropped area are—

<i>Bhadoi</i> —			
Food-crops	...	19.34	24.73
Non-food-crops	...	5.39	
Winter rice	...	...	47.74
<i>Rabi</i> —			
Food-crops	...	18.53	27.53
Non-food-crops	...	9.00	

It will thus be seen that winter rice is by far the most important crop in these provinces, covering as it does an area nearly equal to that of all other crops put together, and about $1\frac{1}{2}$ times the area covered by other food-crops; while the normal area covered by *bhadoi* or autumn rice is 7,600,000 acres, or 11·3 per cent. of the total cropped area. All known famines in Bengal and Orissa have been rice famines. In Bihar and Northern Bengal the *bhadoi* and *rabi* crops may afford the turning point between famine and no famine, but even there the immediate cause of scarcities and famines has always been the failure of the great winter rice crop. The early cessation of the usual rains in September and total want of rain in October has therefore, *cæteris paribus*, a more serious and lasting effect in areas where rice is the sole or predominating crop than it can have in districts or parts of districts in which three harvests of nearly equal relative importance are annually reaped. In such districts it may take two or three years of short rain to make a famine. If in such areas one harvest fails, the loss is partially made good by another harvest in the same year, but it is manifest that where rice is the only or almost the only crop and the cultivators are poor, and therefore have no stocks of grain or money to fall back upon, a total or very serious failure of the rice crop even in one year must cause acute distress. In this fact lies the explanation of what may appear to uninformed persons anomalous. They may have observed that in the southern tracts of Darbhanga, Muzaffarpur and in Saran the rainfall was as deficient as in the northern tracts, but yet there was comparatively little distress in the former areas or in the adjoining districts of the North Western Provinces, and being unacquainted with the local conditions, they infer that neither could there have been intense distress in the northern areas; but they overlook the fact that in the southern parts of the North Bihar and in the North-Western Provinces districts there is not one harvest reaped but three in the year; that all three harvests scarcely ever fail, and that a failure of the sole crop of the year (the rice) in the rice-growing areas is equivalent to the failure of three harvests where three harvests are reaped in the year. There never has been a famine in the areas in which *rabi* and *bhadoi*-crops preponderate in Bihar, and no such tract has ever been declared to be seriously distressed.

Except in Orissa and parts of Shahabad, Patna and Gaya the protection afforded from famine by irrigation from canals in these Provinces is not very great and in the distressed areas is insignificant. The only divisions in Bengal outside of Orissa, which are provided with canal systems are those of Patna and Burdwan; and although the area actually irrigated during 1896-97 was the largest ever recorded and the Sone Canals proved to be most beneficial, yet the irrigated acreage under the various crops during the year as compared with the year preceding, is reported only to have been—

		1895-96.	1896-97.
		Acres.	Acres.
<i>Bhadoi</i> and winter rice crops	...	472,623	672,916
<i>Rabi</i> , inclusive of hot-weather crops	...	143,531	257,845
Total	...	616,154	930,761

To this may be added the area irrigated from rivers, tanks and wells, with regard to which no statistics are available, but even if this area, were taken into consideration, it would be of so small account in comparison with the total area covered by food-crops, that the favourable distribution of the rainfall must be the dominating factor in the question of failure or non-failure of crops, and irrigation at best can afford but a slight palliative against the disastrous effects of short rainfall.

The distribution of rainfall most favourable to the winter rice crop is when premonitory showers fall in May or early in June. The rain in the latter half of June and in July should be heavy, then should come an interval of comparatively fine weather, so as to permit of weeding operations being successfully carried on. The September rains should be heavy, shading off into fine weather with showers in October. On the sufficiency of the rainfall

Distribution of rainfall most favourable for the different crops.

in September more than in any other month depends the character of the outturn of this crop. The preparation of rice land commences much earlier in East and North Bengal, and in the eastern districts of South-West Bengal than in the rest of the Lower Provinces. The ante-monsoon showers, which fall in April, May, and the first part of June, are, in consequence, of more importance in these latter parts than in other places, where lands are usually prepared after the commencement of the monsoon rains. These conditions are also favourable to the *bhadoi* crops. The ante-monsoon showers of April, and in parts of Lower Bengal showers in March, are very necessary for the preparation of lands for these crops. From April onwards rain is required at frequent intervals, but should not be copious or continuous. Autumn rice is generally sown in May or earlier. Heavy rain at this time and in the month following is therefore injurious to the sowing and successful germination of that crop. Scattered showers with intervals of sunshine, on the other hand, are very useful. The climatic conditions most suitable to the cultivation of the *rabi* or cold-weather crops are when the monsoon rains cease early in October after thoroughly moistening the ground, and are followed by a few showers during the remainder of that month and the first half of November. A little rain in December and also in January is requisite to enable the crops to attain their full growth.

Far different from these, the husbandman's ideal, were the climatic conditions of 1896, and the effects of the adverse conditions of that year were intensified by short crops in the preceding year.

Climatic conditions of 1896 far different from favourable.

The last year of good harvests preceding the recent famine was 1894-95, when the general outturn of the *bhadoi* crop for the Province was estimated as up to the average,

Season of 1894-95.

or 16 annas. The season was also most favourable for the winter rice. As regards the *rabi* crops, the latter part of the monsoon season of 1894 was characterised by unusually late rain, which lasted till the end of the first week of November, and was particularly heavy in Bihar, Chota Nagpur, and North Bengal. This interfered with the timely preparation of the land, and in many districts prevented the sowing of the whole of the usual *rabi* area. The general outturn for the Province was estimated at 13 to 14 annas.

The season of 1895, although on the whole favourable to the *bhadoi* or autumn crops, was bad for the winter rice, inas-

Season of 1895-96.

much as the rains were unevenly distributed at the time of sowing, and ceased too early to ensure a full outturn. Then followed a prolonged drought, which lasted throughout the cold weather, and materially injured the *rabi* or spring crops. For the Province as a whole the outturn of the *bhadoi* crops was estimated at 14 annas, of winter rice at 13 annas, and of the *rabi* crops at 11 to 12 annas. The winter rice, however, in only 2 districts amounted to more than an average crop; of the remaining districts, 3 reaping an average crop, 20 from 12 to 16 annas, 15 from 8 to 12 annas, and 5, 8 annas or less. In five of the six districts of the Patna Division the outturn of this crop was from 9 to 12 annas. Out of the 44 districts from which returns were received for the *rabi* crop, only one had a 16-anna crop, 18 from 12 to 15 annas, and 25 less than 12 annas.

The condition of things in the Patna Division at the end of the year 1895-96 was summed up by the Commissioner in his Annual Administration Report as follows:—

"All that can be said is that with a people so largely agricultural as the population of the Patna Division, the margin of prosperity beyond the fixed limits of bare subsistence varies directly with the harvests of the year. In 1893-94 and 1894-95 the harvests were good; in 1895-96 the year began well with a good *rabi* in the early months of 1895 and a good *bhadoi* to follow; but the aghani rice and *rabi* were both poor. In these circumstances all that can be said for 1895-96 is that the people were a little less prosperous than in the previous year, but they are very far from scarcity or want, and a year of good harvests will put them in good case once more."

Unfortunately this succeeding year was the reverse of good. The rainfall of 1896 was very nearly as short as in 1873, and was worse distributed. In 1873 the rain did not begin till July, and even then was scanty. It lasted more or less, but never abundantly, till the end of August, when

Season of 1896-97 as compared with 1873-74.

it for the most part ceased prematurely. Enough had, however, fallen to secure a fair yield of the *bhadoi* crops, which are reaped in August and September. Little or no rain fell in the months of September, October, November, and December, but heavy showers in the last week of January and in the beginning of February 1874 secured a good *rabi* harvest, and caused a considerable contraction of the area and degree of distress anticipated.

But in 1896 there was an almost entire absence of rain in April except in Eastern Bengal, though in May showers were frequent in North and East Bengal. In South-West Bengal and Bihar the rainfall during this month was practically normal, although in Orissa and Chota Nagpur it was below the average. The monsoon rains were most unevenly distributed. In June there was very little rain in North Bihar, while in South Bihar, as also in Orissa, Chota Nagpur, Burdwan, and the Presidency Divisions it was excessive. In July rainfall was deficient over the greater part of these provinces, especially in Bihar, (where practically no rain fell between the middle of July and the middle of August,) and was again excessive in Orissa and in some districts of the Burdwan and Chota Nagpur Divisions. In August the rainfall was everywhere deficient except in Orissa, where the heavy falls led to a series of floods, which destroyed the standing crops over a large area. In the first week of September there was general rain everywhere except in Bihar, where the deficiency continued into the second week, although elsewhere there was a general fall. After the 19th September there was practically no rain, except scattered and local showers. It was this failure of the rain in September and October which is so essential for the rice crop that caused the famine of 1896-97. As, however, in 1873, good showers in the Christmas week, in the beginning of February and towards the end of March were of great value in refreshing the *rabi* and encouraging the raiyats, especially in the Patna and Chota Nagpur Divisions.

The following table shows the mean actual rainfall in the affected districts during the monsoon period (1st May—31st October) in comparison with the normal fall and the falls in the corresponding months of 1873 and 1895, with the percentage of excess or defect in each case:—

DISTRICTS.		Normal.	1873.		1895.		1896.		
			Rainfall.	Percent- age of excess or defect on normal.	Rainfall.	Percent- age of excess or defect on normal.	Rainfall.	Percent- age of excess or defect on normal.	
1		2	3	4	5	6	7	8	
PATNA DIVISION.	{	Shahabad ...	40.15	30.19	-24.8	38.07	-5.18	29.47	-26.6
		Saran ...	42.83	31.40	-27.7	44.24	+3.3	22.29	-47.96
		Champaran ...	52.80	33.03	-37.2	57.34	+9.01	27.94	-46.8
		Muzoffarpur ...	43.49	30.80	-29.18	47.73	+9.75	30.99	-28.74
		Darbhanga ...	47.38	24.22	-48.6	42.08	-11.09	35.73	-24.5
BHAGALPUR DI- VISION.	{	Bhagalpur ...	48.68	30.27	-37.8	41.00	-15.7	37.27	-23.4
		Sonthal Parganas	48.70	33.62	-32.3	36.74	-26.07	41.67	-16.15
CHOTA NAGPUR DIVISION.	{	Hazaribagh ...	50.05	53.72	+7.33	43.03	-14.03	47.04	-6.01
		Palamau ...	46.45	39.11	-16.8	28.38	-39.9	32.71	-29.5
		Manbhum ...	49.09	42.10	-14.23	39.86	-18.8	40.38	-17.7
BURDWAN DIVI SION.	{	Bankura ..	51.64	39.08	-24.3	43.57	-15.6	44.97	-12.9
PRESIDENCY DIVISION.		Nadia ...	50.24	39.21	-21.9	34.11	-32.1	38.94	-22.49
	Murshidabad ...	48.89	31.86	-34.8	31.61	-35.3	39.15	-19.69	
	Khulna ...	57.53	50.22	-12.7	52.36	-8.9	47.07	-18.18	
ORISSA DIVISION		Puri ...	52.38	50.41	-3.74	68.84	+31.4	65.98	+5.7

It will be seen, therefore, that in the Patna Division the total defect in the monsoon of 1896 as compared with the normal, was far greater than in 1873 in Champaran and Saran and somewhat greater in Shahabad. In Muzaffarpur

Rainfall as different and worse distributed than in 1873-74.

the defect of both years was about the same, but in Sitamarhi, the centre of the great rice-producing area, the percentage of deficiency was as much as 41·6 against 25·3 in 1873. In Darbhanga the rainfall of 1896 was heavier than in 1873, but it was peculiarly ill distributed. There was good rain in the end of June and beginning of July, but then there was a break for six weeks during which there were cloudless days of burning sunshine. The rain which fell in August found the ground parched, and the water level little higher than in the end of June. In neither of the affected districts of the Bhagalpur Division was the defect so great as in 1873, but in both districts 1895 also was a year of short rainfall, and in Deoghur and Jamtara comprising the distressed area in the Sonthal Parganas the defect in 1896 was roughly 21 per cent. against 16 in 1873. In the distressed districts of the Chota Nagpur and Presidency Divisions the defect during 1895, except in Khulna, was as serious as that in 1896, and the rainfall generally worse than in 1873.

It is not, however, the total volume of rainfall that has alone to be considered, but also its distribution, which is even more important, for on the fall in September and October, depends the question of failure or non-failure of the winter rice. The failure of the rains in these important months is clearly shown by the following figures of mean district rainfall:—

Mean rainfall for the affected districts in September and October.

	NORMAL.			1873.			1896.		
	September.	October.	Total.	September.	October.	Total.	September.	October.	Total.
1	2	3	4	5	6	7	8	9	10
Shahabad	6·83	2·87	9·70	3·43	Nil.	3·43	2·30	Nil.	2·30
Saran	7·60	3·49	11·09	1·12	Nil.	1·12	1·28	Nil.	1·28
Champaran	9·50	3·31	12·81	0·51	Nil.	0·51	2·35	Nil.	2·35
Muzaffarpur	7·57	2·64	10·21	2·85	Nil.	2·85	2·73	Nil.	2·73
Darbhanga	9·91	2·10	12·01	3·87	Nil.	3·87	6·21	0·03	6·24
Bhagalpur	9·27	2·59	11·86	4·54	0·03	4·57	9·47	Nil.	9·47
Sonthal Parganas	9·17	3·57	12·74	5·14	Nil.	5·14	7·97	0·10	8·07
Hasaribogh	8·51	3·44	11·95	9·06	0·20	9·26	6·47	Nil.	6·47
Palamau	7·82	2·78	10·60	5·05	Nil.	5·05	4·28	Nil.	4·28
Manbhum	7·79	2·62	10·41	6·48	0·07	6·55	5·20	Nil.	5·20
Bankura	8·15	3·16	11·31	3·60	0·45	4·05	4·42	Nil.	4·42
Nadia	8·12	4·12	12·24	3·28	0·81	4·09	8·45	Nil.	8·45
Murshidabad	9·02	3·08	12·70	5·83	0·78	6·61	7·76	0·01	7·77
Khulna	8·85	4·4	13·79	6·59	0·50	7·09	10·46	0·14	10·60
Puri	10·74	1·91	12·65	9·61	3·02	12·63	7·48	0·87	8·35

Whether, then, we look to the total aggregate rainfall or to the fall in the important months of September and October, it will be seen that the deficiency was as great as in 1873-74 and, as like causes produce like results, it was to be expected that the crop failure also would be as bad as in 1873-74, as in fact it is reported by all authorities to have been. In the Patna Division the monsoon was late in beginning, not breaking till the end of June, after which a heavy burst early in July caused floods, especially in Muzaffarpur, and was followed by a period of drought till the middle of August, and again to the middle of September, which scorched up what had escaped the floods, and left the rice seedlings to wither in the seed-beds. After the middle of September no rain fell at all till towards the end of November, when the fall was practically confined to South Bihar. The conditions in the Bhagalpur Division were similar, and after the late commencement of the monsoon the Division shared in the break from the middle of July to the middle of August, which ruined the *bhadoi*, and in the drought from the end of September to the end of the year. The figures for the district of Bhagalpur are misleading, as the September rain was confined to one heavy fall between the

14th and 20th of the month, which only momentarily improved the prospects. In Chota Nagpur the ante-monsoon showers in April and May, necessary for the preparation of the land, were very deficient; in June, and in Hazaribagh in July, the fall was excessive, and did much harm to the weakly crops, while in August, September, and October the monsoon withered away. In the Presidency Division, too, the figures are apt to convey an impression more favourable than the reality. The rain in Nadia with the exception of a few showers in the end of September ceased entirely from the 19th of that month to the end of the year, and the usual inundations upon which the Kalantar depends were wanting. Outside the Kalantar, where the *aus* and not the *aman* paddy is the important crop, it was the failure of the August rain which was so disastrous. At Meherpur only 2.85 inches were registered in August, against 16.82 in 1873-74 and a normal of 12.31. In Khulna the rainfall in the last week of September was 0.78 inches only, and in October 0.14 inches only, while in Schiamnagar, in the affected tract, the total September rainfall was 6.22 inches only. Khulna is, however, a district which has always been supposed to be practically safe from famine. The deficient rainfall would not of itself have caused distress requiring the intervention of Government in that district, had it not been that its effects were aggravated by the previous impregnation of the soil with salt.

Looking to the actual climatic conditions of the seasons of 1895-96 and 1896-97, as compared with the ideal conditions for a full outturn of the various harvests, it is obvious that a short crop must have been the consequence in 1895-96, and that a very serious failure was to be expected in 1896-97. The effect of such a failure on any individual district would depend largely on the extent to which that district was dependent upon each harvest for its food-supply. The relative areas under each description of crop throughout the Province have already been shown, but the relative proportion in the affected districts remains to be examined.

In the Patna Division as a whole winter rice provides 48.83 per cent. of the food-crops, *rabi* 28.73 per cent., and *bhadoi* only 22.52 per cent., while of the individual affected districts, Shahabad, Darbhanga, and Muzaffarpur depend chiefly upon their rice crop, to a less extent on their *rabi*, and still least of all on the *bhadoi*. In Saran all three crops are of about equal importance, while in Champaran, although the distribution is more even, winter rice is the principal and in the most severely affected areas almost the only crop, and early rice forms a larger proportion than elsewhere of the *bhadoi* crop. In the districts of Bhagalpur and the Sonthal Parganas, winter rice is by far the most important crop, the *bhadoi* being of slightly greater consequence than the *rabi*. In the Chota Nagpur Division rice constitutes no less than 63.3 per cent. of the food-crops, while the *bhadoi* amounts to 28.1 per cent., with the *rabi* unimportant—only 8.4 per cent. In Manbhum and Hazaribagh rice is by far the most important crop, with the *bhadoi* and the *rabi* respectively as the least important. In Palamau the crops are more evenly divided although the largest area is under rice. In Bankura, Khulna, and Puri winter rice constitutes roughly from 75 to 85 per cent. of the area under food-crops, with the balance to the *bhadoi* and the *rabi* in about equal proportions. In the affected area in Nadia the early rice crop is the most important and after that the winter rice; in the distressed portion of Murshidabad winter rice is the principal crop.

The action of an unfavourable season, however, is twofold, causing a reduction in the area sown, as well as a reduction in its ultimate outturn, and a very large reduction in the area of *rabi* crops sown was the natural result of the absence of the rain from the end of September onwards, which was necessary to moisten the land for preparing and sowing. The winter rains in January and February greatly benefited the *rabi* crop, but only what was then sown.

The estimated outturns of the various crops for the Province as a whole during 1896-97 were as follows:—

Bhadoi.	Winter rice.	Rabi.
10½ annas.	7½ annas.	10½ annas.

For the affected districts the estimated outturns of the different harvests, as given in the Divisional Administration Reports and in the forecasts of the Agricultural Department, are shown in detail below and as compared with the years 1895-96 and 1873-75 :—

District.		Bladri.			Winter rice.			Rabi.		
		1873-74	1895-96	1896-97.	1873-74.	1895-96.	1896-97.	1873-74.	1895-96.	1896-97.
1		2	3	4	5	6	7	8	9	10
		Annas.	Annas.	Annas.	Annas.	Annas.	Annas.	Annas.	Annas.	Annas.
PATNA DIVISION.	Shahabad	4	18	7	2	8½	4	16	11½	11½
	Saran	10½	16	6	1½	12	1½	7	11½	11½
	Champanan	12	13	8	6½	13	8½	8½	11	11½
	Muzaffarpur	11½	12	5 to 6	4½	10½	3	10	8	12
	Darbhanga	9	18½	10½	2½	11	6	8½	8	14½
BHAGALPUR DIVISION.	Bhagalpur	N. 6 S. 10	14½	9	N. 8 S. 7	11½	8½	16	10	12½
	Sonthal Parganas	12	18½	10	6 to 9	10	8	Poor	10	7½
	Hazaribagh	5	15	10	10	10	8	Not available.	10½	8½
CHOTA NAAGPUR DIVISION.	Palamau	Complete failure.	11	8½	N. E&A. centre 2 to 4. Rest of district 5 to 7	10	6	Ditto	7	8
	Manbhum	Not available.	16	8½	Not available.	10	7	5 to 8	13	4½
	Burdwan	Ditto	13	12½	Ditto	9	8	Not available.	12½	7
PRESIDENCY DIVISION.	Nadia	12	9	6	5	7½	2½	Ditto	8	4½
	Khulna	Not available.	11½	8½	9	11½	6	Ditto	10½	9½
	Murshidabad	12	9	8	6	8	7	Ditto	13	8
ORISSA DIVISION.	Puri	13	11	7½	11 to 12	15-6	9	8 to 13	9½	8½

It thus appears that, according to the official reports, the outturn of all harvests was short in 1895-96, while the reported yield of 1896-97 of all harvests and of the rice crop especially was worse than 1873-74. But official statistics of crop outturns in Bengal not being trustworthy, the Lieutenant-Governor turned to what he believes to be a more reliable source of information on this point, namely, the personal local knowledge of the officers employed in the distressed districts, and more especially the local knowledge of indigo-planters and other private gentlemen, native and European, who were in Bihar in 1873-74 and are there still. His Honour, finding at the Sonapore Conference in November that their opinion coincided with the conclusions suggested by the official statistics of rainfall and crop outturns, namely, that the crop failure was as great as in 1873-74, felt that there was no longer room for doubt that a grave emergency had to be faced in Bihar.

In the opinion of the Famine Commission the experience of previous famines had shown that an estimated failure of one-third of the year's outturn would demand the utmost vigilance and preparedness on the part of the authorities; that as long as more than one-half of the year's outturn is secured, pressure will exist, but no such distress as to require special measures of relief, while the failure of three-fourths of the whole outturn would be accompanied with intense famine. In the Patna Division the deficiency of 1895-96 in Shahabad, Darbhanga, and Muzaffarpur was over 30 per cent. In Champanan it was somewhat less, but a large portion of the crop of that district was estimated to have been exported. The comparatively smaller failure in Saran placed that district in a more favourable position than the others in the ensuing year. In 1896-97 the failure in every district except Patna and Gaya,

was more than 50 per cent. In the Chota Nagpur Division, speaking generally, the food-outturn of the three affected districts showed a deficiency of 30 per cent. in 1895-96, and rather more than 50 per cent. in 1896-97, the crop failure of 1896-97 being worst in Palamau, but serious in every district. In the Bankura and Puri districts the crop failure as estimated was not quite 50 per cent. in the district as a whole, but in the affected areas it was more. In the distressed portions of the three famine districts in the Presidency Division the deficiency was more than 50 per cent.

In considering the above estimates, several points are to be noticed. In the first place, the figures are for districts as a whole, and it has already been pointed out that in each district acute distress was confined practically to the area which is mainly dependent on the rice-crop. Further, the failure of the preceding year is to be considered. Finally, the crop failure of 1896-97 was accompanied not only by a failure to a greater or less extent of the crops all over the Province, but of the crops all over the rest of India, and the influence of this circumstance in the early stages of the famine in draining surplus stocks for export to the distressed districts of the North-Western Provinces, and in raising prices to a height which had never before been attained over so large an area, was a most powerful factor in bringing about the calamity of the year, especially in those parts of these provinces where the population is poor and depressed, the labouring classes numerous, and wages low. In this connection it should never be forgotten that in Bihar the wage of an agricultural labourer, which term includes petty agriculturists who supplement profits of their small holdings by working for wages, is in ordinary times as low as from $1\frac{1}{2}$ to 2 annas a day; that this wage is barely sufficient to supply food to the labourer and his family when food-grains sell at ordinary prices; that this class has in no way benefited by that rise in prices of agricultural produce which has tended to alleviate the condition of agriculturists; and that with the price of food-grains doubled as it was in 1896-97, it would have been wholly impossible for the labouring classes to subsist on the ordinary wage, assuming that they could find employment, which they could not have done, if Government had not intervened and rescued them from starvation.

In addition, however, to the ordinary cultivated food-crops, special mention should be made of the fruit of mango and *mahua* trees, which in the Patna, Bhagalpur, and Chota Nagpur Divisions is largely resorted to by the poorer classes as an article of diet. Both in the Patna and Bhagalpur Divisions the mango crop was poor, and the *mahua* blossoms which were much injured by storms in March yielded a produce of only from half to two-thirds of the average. In the Chota Nagpur Division, where the Commissioner estimates the *mahua* as a food-staple of greater importance than the *rabi*, the crop was similarly damaged by storms, and the outturn estimated only at from 6 annas in Palamau and 8 annas in Manbhum, to 10 to 12 annas elsewhere. The mango crop was an absolute failure. In 1874 the *mahua* crop in the Chota Nagpur Division was a bumper one, and the mango crop at least an average.

Reference has already been made to the poppy cultivation in the Patna Division as having an important bearing on the economic condition of the people; elsewhere in the affected areas of other districts it is not grown. In the four affected districts of Shahabad, Saran, Champaran, and Muzaffarpur (poppy is not grown in Darbhanga to any extent), the average area under poppy on the figures of the last five years was 211,190 acres, while the average payments to cultivators amounted to no less than Rs. 37,62,297, in addition to a large annual indirect expenditure incurred upon subordinate establishments. In 1896-97, owing to the want of moisture in the land, the area under poppy fell off in Muzaffarpur by 54.16 per cent. and in Champaran by 33.36 per cent., while payments to cultivators decreased by 8.33 and 37.3 per cent. respectively. In Saran and Shahabad the payments to cultivators increased.

No useful attempt can be made to give a quantitative approximation in tons of the crop deficit in the Province in 1873-74, or 1896-97, as compared with normal years. The comparison has, however, been entered into, in more or

Comparison of the crop deficit in 1896-97 with that in 1873-74.

less detail by the local officers, and their general conclusions are identical. The Commissioner of Patna, after a detailed examination of the subject, has arrived at the conclusion that throughout the five affected districts of his Division the estimated outturn was less and the estimated deficiency greater in 1896-97 than in 1873-74. This conclusion is supported strongly in the Champaran district, where experienced gentlemen, like Sir W. Hudson, K.C.I.E., Mr. T. M. Gibbon, C.I.E., and Mr. J. J. Macleod, C.I.E., who had all witnessed the two former famines of 1865-66 and 1873-74, corroborated the unanimous consensus of native and European opinion in the district that the general loss of crop had been worse in the present than in either of the two previous famines. In Chota Nagpur the Commissioner points out that although the *bhadoi* crop of 1896-97 was probably somewhat better than that of 1873-74, yet the principal crop—the winter rice—was distinctly worse, and on a review of this and other attendant circumstances, the conclusion is come to that the people were decidedly worse off in the recent famine, than in the famine of 23 years ago. In the Presidency Division in Nadia, the only district in which comparison can be instituted with the famine of 1873-74, the Commissioner is of opinion that the circumstances were better then, than in 1896-97.

To sum up the facts stated and conclusions suggested in this chapter, it has been shown that the year 1895-96 was one of short crops; that the rainfall of 1896-97 was worse than that of 1873-74; that as a result of that failure the outturn of food-grains was worse according both to official statistics and the opinions of all persons of experience and knowledge of the subject, native and European, official and non-official; and also that the supplementary sources of food-supply were less than in 1873-74. If then the numbers relieved by Government and the cost of relieving them were far less in 1896-97 than in 1873-74, as will be shown in subsequent chapters to have been the case, the cause must be sought either in the more economical methods of famine administration adopted in the recent famine, or in the increased power of the people to resist the effects of crop failure, or in both. The Lieutenant-Governor believes that both causes have operated.

CHAPTER III.

EARLY MEASURES FOR THE ORGANISATION OF THE RELIEF SYSTEM.

As soon as there appeared reasons for apprehending that the abnormal climatic conditions of the year would result in serious deficiency in the outturn of the different harvests, the attention of Government was directed to the maintenance of a close and anxious watch over the situation. As early as the 26th June 1896, a letter was addressed to all District Officers directing them to watch the vicissitudes of the season, and to report promptly to Government any special circumstances which might indicate the probability of relief measures being anywhere necessary. On this as on previous occasions the symptoms of approaching distress first presented themselves in Bihar, and the first letter of warning was submitted by the Commissioner of Patna on the 15th August, reporting that the *bhadoi* crop was withering, the seedbeds were drying up, and large tracts of rice-land were still unplanted. In view of the shortness of the rainfall in September, and the high prices that prevailed in the Province generally, a special report was called for by telegram on the 23rd September 1896. The Commissioner's report showed that everything was depending on the usual rain in the *hathiya* asterism (25th September—8th October), which, if favourable, might even then save the situation. The first indication of a spirit of restlessness manifested itself among the people on the 3rd October, when a case of grain-looting occurred in the Dinapur Bazar. On the 8th October the Commissioner was obliged to report the failure of the hoped-for rain, while strong west winds were withering the standing crops and retarding the preparation of the lands for the *rabi*. At the same time agents were buying grain largely, especially in South Bihar, for exportation westwards; prices were rising rapidly, and the feeling of uneasiness and unrest was spreading. Even then there still was a hope of rain in the *siwati* asterism (*i.e.*, before the 6th November); but should that also fail, the Commissioner was of opinion that scarcity, if not famine, would supervene.

On the 15th October the attention of the Commissioner was specially drawn to the provisions of the Famine Code and the necessity of losing no time in offering work on district roads under the conditions prescribed in section 56 of the Famine Code. The District Boards were directed to revise their budgets by cutting out all avoidable expenditure and appropriating all the funds they could find, to relief works proper. It was pointed out that should no rain fall before the end of October, there could be little doubt that a serious failure of the *aman* rice and *rabi* crops would be inevitable, and that the Local Government would have to largely supplement the funds at the disposal of District Boards. All Executive officers were to be instructed by the Commissioner to study carefully the Famine Code and the history of past scarcities. The Magistrates and Police were to keep a sharp lookout for any indications of rioting, and to take prompt steps to suppress it. The standing crops were to be carefully watched, the stocks of food-grain were to be enquired into, and every effort was to be made to utilise, for the purposes of irrigation, whatever supply of water there might be from hill-streams, tanks, and wells. The Commissioner was also authorized to give loans freely for sinking wells, and to employ, for the purposes of local enquiries, the officers of the Opium, Survey, and Settlement Departments, without interfering for the time being, with their ordinary duties. In the meantime a note was prepared by the Agricultural Department under the orders of Government, giving a *resumé* of the history of past scarcities in Bihar, comparative statements of rainfall month by month, outturn of crops, and prices of food-grains, with the number of persons who came on to relief works or who received gratuitous relief in every year of scarcity since 1873-74. This was circulated to all Commissioners and public associations, and communicated to the Press early in November. In forwarding this note the intention of Government to refrain from all interference with private trade was enunciated and emphasised: all

the information then available to Government was given with the special object of assisting the mercantile community in forecasting the quantity of grain which it might be profitable for them to import, and further detailed enquiries were ordered to be undertaken with a view to ascertaining as nearly as possible, the stocks in hand and the deficit or surplus under or over the requirements for local consumption.

The first preliminary report under section 9 of the Famine Code was submitted by the Commissioner of Patna on 11th November, and on the 19th November, when the rain still held off and it became certain that relief measures on a considerable scale would have to be undertaken, the Lieutenant-Governor, accompanied by the Hon'ble Mr. C. C. Stevens, C.S.I., and the Hon'ble Mr. M. Finucane, Revenue Secretary, proceeded to Sonapur, where the assemblage of many official and non-official gentlemen of Bihar, Native and European, at the annual fair, afforded an excellent opportunity of ascertaining the views of those who were best able to judge as to the gravity of the situation and the measures required to meet it. On the 20th November a Conference was held, at which the circumstances of each district were discussed with reference to the anticipated crop failure and existing food stocks, and the proposed measures of relief were considered and explained by the Lieutenant-Governor.

After the return of His Honour to Calcutta, with a view of settling the more technical details of relief organisation after local enquiry, Mr. Finucane proceeded on a tour through the worst tracts in the districts of Muzaffarpur, Champaran, and Darbhanga, accompanied by the Collectors of these districts. The results of his and their observations and enquiries were afterwards laid before a Conference held at Muzaffarpur on the 4th and 5th December 1896, at which the Hon'ble Mr. Glass, C.I.E., Chief Engineer and Secretary to this Government in the Public Works Department, the Commissioner and the Collectors of North Bihar, and other local officials, were present. The object of the Conference was to work out the details of famine relief organisation on the lines indicated by the Lieutenant-Governor. It was decided to divide the affected areas into charges, each under a Superintendent, the charges being subdivided into circles, each under a circle officer. It was estimated that charges would ordinarily be 300 miles in extent (or 20 miles by 15), which, on a population of the density of Muzaffarpur or Darbhanga, would give some 262,500 people to be supervised by the Superintendent. Each charge would ordinarily contain ten circles. Charges and circles were to be mapped out at once, being doubled up, and two or more amalgamated, should distress at first not be sufficiently severe to call for an officer for each. The Charge Superintendent was to be of the standing of an Assistant or Deputy Magistrate or gazetted officer of the Police, Opium, or other Departments. The existing available staff of Government officers of all Departments was to be fully utilised in the first instance, and as soon as the supply of these officers should prove insufficient, non-official gentlemen possessing local knowledge were to be appointed. The salary for non-officials was fixed from Rs. 200 to Rs. 300, with horse allowance to all Charge Superintendents at Rs. 100 a month; this allowance was subsequently raised to Rs. 150 and Rs. 200 in certain cases. Commissioners of Divisions were authorised to appoint circle officers on Rs. 50 a month, with horse allowance of Rs. 25, which in Khulna was subsequently converted into a boat allowance of Rs. 40 a month. The scale of clerical establishments under the Superintendents and circle officers was considered, as also the details of provision of tents and treasure chests. It was decided that while District Boards should be consulted as to the manner and works on which they might wish their contributions to be expended, all sums which could be made available by them for expenditure on relief works, should be placed to the credit of the District Officer, in order to secure uniformity in the system of accounts and to avoid delays in the provision of funds. It was further resolved that an officer of the Accounts Department should be deputed to Bihar to confer with the Commissioner and the Collectors, and in consultation with them to consider the provisions of the chapter on accounts in the Bengal Famine Code, with a view to the simplification of the accounts system. It was decided that the larger relief works requiring professional

supervision should be placed directly under officers of the Public Works Department with a separate staff and organisation. Schemes of major works of railways and irrigation canals were considered, and steps taken to have the necessary projects prepared. The actual organisation of labour on the relief works was discussed; and with a view of facilitating the due enforcement of tasks, Mr. Glass undertook to prepare a table of scales of work to be done by typical gangs in different kinds of soil.

The recommendations of this Conference were accepted generally by Government. With a view of stimulating the irrigation of the *rabi* crops, sanction was accorded to the grant of a contribution of Re. 1 for each *kutch* well sunk in the affected tracts, and an allotment of two lakhs was made for the purpose. The rules for the grant of advances under the Land Improvement Loans Act were at the same time revised on the lines indicated by the experience gained in the Bundelkhand famine in the North-Western Provinces, and the grant of advances free of interest, was authorised to land-holders and substantial men, for the excavation of tanks and the execution of other petty works in their own villages, with provision for the remission of one-third of the original sum advanced, on condition that the work was carried out to the satisfaction of the District Officer. Subsequently, with the sanction of the Government of India, instruments executed by tenants for advances made by landlords, and those executed by the latter for loans given by Government, were exempted from stamp duty. Steps were at the same time taken early in December to allow the free use of the mahua flower and of edible forest produce in the Government forests of the Chota Nagpur Division and of the Sonthal Parganas.

At the Sonopur Conference it had been brought to notice by various gentlemen of position and local knowledge, that there was a possibility of grain-stocks in the less accessible places becoming depleted before private trade could supply the local deficit, and it was suggested for consideration whether, without in any way interfering with private trade, Government might not advance money at moderate interest and on adequate security to private persons for the purchase and importation of grain from Burma and elsewhere, to be subsequently sold or distributed in the inaccessible tracts at the risk of the importers and at such prices as they might think fit to demand without interference on the part of Government. The suggestion was recommended by the Commissioner as the last bulwark against depletion of stocks in out-of-the-way places, and on the understanding that such advances should only be made to well-known men, who might be trusted not to compete with local traders. In 1873-74 Government had sanctioned arrangements for the grant of advances—

Proposal to give Government loans for importation of grain in inaccessible tracts.

- (a) to zamindars, planters, and others on the condition that they would import grain from a distance and sell it as near as possible at cost price, all expenses included;
- (b) to traders and others of safe and responsible character at a moderate interest of 6 per cent., who were to import grain from a distance, without any conditions as to the rate or manner of selling it.

An arrangement such as the former clearly involved interference with private trade, but the proposal as recommended by the Commissioner of the Patna Division did not seem inconsistent with the principles approved by the Famine Commission, that Government is bound to provide for the supply of grain for relief works and gratuitous relief, and can rightly intervene when local trade fails to act in remote agricultural tracts, where wages are paid in grain, and the local demand is supplied not by imports from distant marts, but by small purchases from the stores of the agriculturists. The proposal was accordingly submitted to the Government of India. The Supreme Government at first demurred to these proposals under the impression that the object in view was to finance a general scheme for the importation of grain; but it was pointed out in reply that the Lieutenant-Governor had already publicly announced at the outset and emphasised his determination not to interfere with private trade, and that he had not the slightest intention of sanctioning arrangements which would involve interference with trade in any way, as to the

undesirability of which he was in entire accord with the Government of India; but that the proposals in question referred only to definite localities of limited area not easily accessible, where the local officers and gentlemen of intimate acquaintance with local conditions and of unquestionable probity, anticipated that difficulty would be experienced in providing grain for relief works, gratuitous relief and local consumption. The Government of India, thereupon recognising that exceptional circumstances might arise justifying and indeed necessitating exceptional measures, left full discretion to the Lieutenant-Governor to act in each case according to the requirements of the situation. Happily, as will be shown in a later chapter, the necessity for taking advantage of that discretion arose in a very few places only.

Meanwhile warnings of impending distress from other Divisions had not been wanting. On the 5th October the Commissioner of the Presidency Division had forwarded reports of a critical state of affairs in the Khulna district, but the preliminary reports being conflicting, it was not until the 16th November that the Commissioner, after a personal visit to the locality, reported that measures of relief would probably be required in the Satkhira subdivision. Reports from the Orissa Division that the premature cessation of the rain was giving more grounds for anxiety than the floods earlier in the year, were received on the 5th November, and on the 12th November the Commissioner of the Chota Nagpur Division submitted a review of the local situation and of his reasons for apprehending that Government measures of relief would be necessary. At the same time from other corners of the Province came rumours of impending famine.

District Officers in the meantime were busy everywhere collecting information of crop prospects from every quarter, advancing money on loans, and encouraging every attempt at irrigation wherever there was a prospect of saving any portion of the crop, while a constant watch was being kept on the state of the local markets and the effect of the steadily rising prices on popular feeling. The cry had arisen in several districts for the stoppage of exportation, and the impossibility of acquiescing with the request was but imperfectly appreciated or understood. As the first practical method of gauging the existence of actual distress, test works were started, usually by adopting test wages on some earthwork already in progress under the District Boards. In the Patna Division, at the time the Commissioner's report of the 11th November, test works had been started in Patna, Shahabad, Champaran and Darbhanga. The works in Shahabad, consisting of road-work in the Bhabua subdivision, failed to attract labour, and were for the most part closed in the middle of December. In Darbhanga, as soon as a task was enforced, the labourers quitted the work, but towards the end of November, signs again appearing of deterioration in the general health of the population, the test works were reopened and the numbers upon them went on steadily increasing. In Champaran, after observations made during October upon the ordinary works under the District Board and planters in the district, test works were opened in the second week of November, and by the end of the month were in full swing. Test works in Muzaffarpur were started in the Sitamarhi subdivision in the first fortnight of November, but were sparsely attended. In the second fortnight, however, it was found necessary to open them in the Sadar subdivision. In the Saran district test works in the Gopalganj subdivision were opened in the end of November, but in the Sadar and Siwan subdivisions not until the end of December. In the Bhagalpur Division no actual measures of relief were found necessary before the end of the year 1896. In the Chota Nagpur Division the Hazaribagh district was the first to show the effects of scarcity. Attention being drawn to the large numbers of destitute travellers during November and December along the Grand Trunk Road, kitchens were opened for their relief, and money placed at the disposal of thana officers for the relief of stray cases. Test-works were also opened but failed to attract any rush of labour. No actual measures of relief were found necessary in the other districts of the Division during the calendar year. The only other districts in which relief measures were started before the 31st December 1896 were Nadia in the Presidency Division, where a test-work opened on 15th November quickly attracted labour, and in Khulna, where works were opened from the end of November.

At the close of 1896 relief works were in progress in seven districts, and the total numbers on them in the Province on the 26th December amounted to 44,901. The mapping out of the charge and circle organisations in the districts where distress was becoming acute was well in hand, and the charges were being manned. For relief of stray cases of acute distress money had been made over to station police officers, and regular gratuitous relief commenced in Saran, Champaran and Darbhanga with a total of 7,439 recipients at the close of the year. Enquiries as to the prospects of the ensuing months were well advanced, and the local officers were in possession of much valuable information as to the probable development of events, and prepared to grapple with whatever situation might arise. Matters had by this time passed from apprehension of distress to certainty, and arrangements from the stage of discussion to practical organisation.

General summary of the situation at the close of 1896.

CHAPTER IV.

PROGRESS OF THE FAMINE DURING 1897.

The new year opened therefore with famine established in seven districts and the apprehension of its declaration elsewhere.

It is not possible nor necessary to trace in detail the progress of the famine in each of the affected districts; to describe the local difficulties and crises met with, or to denote the special influences at work in individual districts to cause changes and fluctuations in the numbers on relief. The economic conditions, the proximate causes of famine, the time of harvesting the crops, the nature of the crops grown, and the normal staying power of the population—all vary so much in such widely different districts as Champaran in one direction, Palamau in another, and Nadia in a third, that no general statements or explanations can hold good of all of them alike at any one period. On the one subject alone of the fluctuations of the numbers on relief works much might be written: general events such as the harvesting of the *rabi* and the breaking of the monsoon which made their effect felt everywhere can be indicated; but it is not proposed to deal here with the weekly fluctuations in individual districts due to the opening of new works, the closing of others, the stricter supervision over labour and its consequent temporary strikes, local holidays, passing showers of rain, and the hundred and one minor causes which constitute the famine history of each district. Full and complete information will be found in the reports of the Commissioners and Collectors of the affected districts; in the present chapter it is only intended to sketch briefly the outline of the progress of the famine, leaving the special points in the relief system to be dealt with subsequently.

During the month of January favourable rain was reported from the Patna Division, which immensely improved the prospects of the cold-weather crops, though the area of distress widened in the Shahabad, Saran, and Champaran districts. Relief works were by this time open in all the four districts of North Bihar and in Shahabad. Test works were also opened in Rajshahi, and relief works

This Government under a disadvantage for want of village revenue officials as compared with other Provincial Governments.

were in progress in Nadia and Khulna. The Government of these provinces was placed under a great disadvantage in that it had not at its disposal a staff of village revenue officials such as are available elsewhere, while the Public Works Department staff had become so depleted in recent years that few of its officers could be spared for famine work. Although the Lieutenant-Governor had at the Sonapore Conference sanctioned the entertainment of a strong supervising establishment at the very outset, and had transferred to the distressed districts, every officer who could be spared from districts more favourably situated—yet the rush of people seeking employment on relief works was so great that it was found at first impossible to control them and to exact the full task, on the enforcement of which, as a test of distress, Sir Alexander Mackenzie had from the beginning laid much stress. The class of non-official subordinates who had to be selected in haste out of a crowd of applicants were usually untrained and untrustworthy. This was especially the case in Darbhanga and Champaran, where the labourers were not slow to take advantage of the situation, causing confusion by crowding on to works and clamouring for wages without labour. Collectors were still struggling with the elaborate classifications of labour under the Famine Code, and even the supervising staff had much to learn in the practical organisation of a crowd of workers. Much benefit was derived from a visit paid to Bihar by Mr. Glass, Secretary to Government in the Public Works Department, and from the practical hints on the management of works which he was able to give, and it was decided to introduce the agency of the Public Works Department to the fullest extent possible. By the end of the month, much progress had been made; the Public Works Department had commenced to take over some of the works, and with experience gained, discipline was being rapidly restored, and the works brought under efficient control. Gratuitous relief had been started in all four districts of North Bihar

in Nadia and in Khulna, though the organisation of the distribution had been hampered by the more urgent calls upon the superior staff for the supervision of the works. Poor-houses had been opened, and the opening of private relief works on a considerable scale commenced by the Maharaja of Darbhanga and the Court of Wards on behalf of the Hatwa Raj. At the close of the month relief was being given to 338,810 persons, of whom 75,691 (mostly in Darbhanga, where the organisation was most complete,) were in receipt of gratuitous relief. It is a remarkable feature of the recent famine that the people rushed to relief works at a much earlier period than in 1874, the numbers in receipt of relief at the end of January 1874 being 113,224 upon works and 378 only upon gratuitous relief, against 338,810 in 1897. This is due no doubt partly to the higher prices that prevailed in 1897 and partly to the fact that arrangements for giving relief were taken in hand at a much earlier stage than in 1874. But if the numbers on relief in January were three times as large in 1897 as in 1874, in subsequent months the maximum numbers on relief works were less than one-fourth of the numbers of 1874—a fact which indicates the wisdom of making early and sufficient arrangements for meeting distress, and the necessity of exacting full tasks. Had tasks not been rigidly enforced in Bihar at the early stages of the famine, it is believed that the numbers on relief works would have ultimately approximated to those of 1874, which reached the enormous total of a million and seven hundred thousand souls.

Light rain fell in the first half of February, which was beneficial to the crops in the Patna and Chota Nagpur Divisions. In

February.

the Patna Division the affected areas in the districts of Saran and Champaran were slightly extended and the organisation of relief set on foot in the Bhabhua subdivision of Shahabad. Distress had commenced to manifest itself in new districts. In Palamau test works had been opened at the end of January, and were converted into relief works during the ensuing month, while test works had been found necessary in Manbhum and Hazaribagh. In the Presidency Division test works were opened in Jessore and Murshidabad, and in the Bhagalpur Division relief works had to be undertaken in the district of Bhagalpur. A test work was also opened in Pabna, and gratuitous relief commenced in the districts of Shahabad, Bhagalpur, Palamau and Manbhum. The centre of acute distress, however, still continued to be the Patna Division, and of the 268,213 persons on relief works and 141,789 on gratuitous relief on the 27th February, the majority were to be found in North Bihar. The numbers, however, which had been rising steadily to the middle of February, had received a check, as the harvesting of the *rabi* commenced to afford other means of employment. The improvement in the organisation of works was continuing, although the Public Works Department, for want of an efficient staff, were experiencing difficulty in taking over charge of works; and application was made to the Government of India for assistance in supplying suitable officers. On civil works the figures of outturn of work done and of cost rate were showing a satisfactory improvement. The first warning of depleted food-stocks had come from Palamau where a bounty on importation was sanctioned. In the end of the month the Lieutenant-Governor paid a visit to the affected districts of North Bihar. On visiting these districts His Honour satisfied himself by personal observation that there could be no question that distress was both acute and wide-spread, but that so far it had been adequately met and the results attained had been satisfactory. A conference with the local officers was presided over by Sir Alexander Mackenzie at Darbhanga, where the details of the management of relief works were still further elaborated.

Throughout the month of March distress spread everywhere, and the

March.

numbers on relief rose regularly week by week until at the close of the month they amounted to 302,789 on works and 225,748 on gratuitous relief, or a total of 528,537. Rain fell during the month, which did good by refreshing the lands generally in the Patna, Bhagalpur and Presidency Divisions, but on the other hand, in the district of Champaran, the standing *rabi* crop was damaged by hail; in the Chota Nagpur Division, the *mahua* blossoms were considerably damaged by the rain, and the *rabi* crops attacked with rust and blight. The mango crop was reported to be poor everywhere. The area of distress deepened

during the month in the Saran, Champaran and Darbhanga districts of the Patna Division, while in the Chota Nagpur Division the test works in Palamau and Hazaribagh were converted into relief works, although the numbers upon them were small; in Manbhum, on the other hand, two of the test works were closed, as the gathering of the *mahua* crop afforded a temporary means of sustenance here and throughout the Division generally. In the Presidency Division distress was spreading in Khulna and Nadia. Relief works were opened for the first time in the Sonthal Parganas and in a small area round the Chilka Lake in Puri, while gratuitous relief was started in both districts and in Hazaribagh. In the Patna Division the Public Works Department was still making somewhat slow progress in the taking over of works, and the Government of India was indented on for the assistance of commissioned officers in addition to the non-commissioned officers already asked for. The effects of the rain and of the *rabi* harvesting were shown in fluctuations in the numbers on relief works, especially in North Bihar, but the numbers on gratuitous relief, were rising steadily as the pressure increased and the organisation for relief was perfected.

With the beginning of April although no new district was added to the list of distressed areas during the month, the Province entered upon a period of steadily deepening distress, and in spite of local variations in numbers, due to the *rabi* and *mahua* harvests and minor local causes, the numbers on relief for the Province as a whole went on steadily increasing week by week until they touched their highest point in the first week of June. By the end of April the total number on relief had risen to 678,467, of whom 365,512 were upon works and 312,955 in receipt of gratuitous relief. Rain fell generally during the month, and did much good in improving the prospects for the *bhadoi* crop, though in Champaran, where the *rabi* crop is late, some harm was done, and in Hazaribagh the *mahua* crop suffered. The rain was everywhere bad for the indigo crop in Bihar. In the Patna Division the progress of handing over works to the Public Works Department was still impeded by difficulties in obtaining a suitable staff. Two new important major works on the Tröbeni and Dhaka canals were, however, commenced by the Department in Champaran, and at the close of the month an important change was made by the introduction of a system of piece-work in selected areas in the place of the elaborate task-work system of the Famine Code. The Military officers asked for from the Government of India were also commencing to arrive.

The most marked feature of the month of May was a general increase everywhere in acute distress, the total number on relief at the end of the month reaching the high figure of 828,715. In the Patna Division the daily average for the month was the highest recorded in every district except Shahabad, where a slightly higher level had been reached in the previous month, and Champaran, where the *rabi* harvest in Nipal drew off a certain amount of labour, and the payment of the opium advances brought a large sum of money into the district. One new district—Bankura—was added to the list of affected districts during the month, and test works were opened, while gratuitous relief was started both in that district and in Pabna. There was general rain throughout the Province, and the preparation of the land for the coming crops was being encouraged everywhere by loans and advances. Prices everywhere were very high, especially in the Chota Nagpur Division, where, in consequence of the exceptionally high prices in Palamau, the decision was come to to import grain by Government agency for use on the relief works and for gratuitous relief. The charitable relief organisation was being completed and the system of piece-work was being extended, notably on the Sakri-Jainagar line in Darbhanga.

In beginning of June before and up to the breaking of the monsoon rains the famine operations reached their zenith, and in the first week of that month the numbers on relief amounted to 842,034, of whom 384,252 were on works and 457,782 on gratuitous relief. From then onwards, with the exception of a slight check in the second week of July, the numbers commenced to dwindle, as the favourable monsoon began to restore confidence and to afford employment in

the preparation of the land for the sowing of the rice and in weeding the *bhadoi* crops. The monsoon broke early in the month, but heavy rain was delayed till the end of June, when portions of the districts of Patna and Saran were flooded, causing an increase of the numbers on relief in the latter district. Then followed a short break in the rains, and anxiety once more was felt, which subsequent showers fortunately removed, although not before the break had caused a large rise in numbers in Champaran. In the Chota Nagpur Division agricultural operations were in full swing by the end of the month, but the course of the monsoon was here more capricious than elsewhere and was anxiously watched. Prices, especially in Palamau, still continued abnormally high. There was a considerable extension of kitchen relief, as, although the physical condition of the people was generally good, the children in places showed signs of being underfed. Regular relief works were opened in Bankura, and test works in Lohardaga and Singhbhum.

During the month the Officiating Lieutenant-Governor paid a visit to the affected districts. In the districts of Nadia and Khulna His Honour found that gratuitous relief was being given to able-bodied Muhammadan women who, it was alleged, would starve rather than work publicly on relief works. When the tests proscribed by the Famine Code are relaxed under a belief of this kind, it necessarily follows that a wholesome and self-acting criterion of distress is removed, and everything depends on the discretion of the local officers. There was reason to think that this discretion had not been exercised altogether wisely in this case, and that gratuitous relief was being given too freely. A rigid scrutiny of the lists was ordered, and the local officers were directed to send to the poor-house females of the lower classes who were able to work, but refused to do so. In North Bihar Mr. Stevens had an interview with Mr. Higham, who was there making enquiries on deputation from the Government of India; and as a result of this interview and of his own personal observations and enquiries, His Honour was convinced that gratuitous relief was not being too freely given in Bihar, that relief works were being conducted in an efficient and economical manner, and that they had neither competed nor interfered with private works. In fact the Officiating Lieutenant-Governor had the satisfaction of learning from Mr. Higham that a larger task of work was being enforced as a test of distress, that relief works were being better conducted, and that the physique and morale of the labourers on relief works were better in Bihar than in any province that he had visited, while of several thousands of recipients of gratuitous relief seen by Mr. Higham and the Officiating Lieutenant-Governor himself, there were not a dozen persons who were not manifestly fit objects for it.

The numbers on relief continued steadily to decline during July, and in the last week of the month only 166,429 persons were on relief works and 395,505 on gratuitous relief, or a total of 561,934. When the breaking of the rains began to afford employment in the fields to the labourers hitherto supported on the relief works, they left the works of their own accord, but the classes in receipt of gratuitous relief were not benefited until the new crops came into the market, and the springs of private charity again began to flow. The rains in the Patna Division were generally favourable and the prospects of the *bhadoi* excellent; relief works in the Shahabad district were accordingly closed at the end of the month. The floods in Saran had, however, added to the distress in that district. In the Chota Nagpur Division the fall was below the average, but prospects were still good, and the test works in Singhbhum were stopped. Prices, however, still continued to rise, and apprehension as to the state of food-stocks in Lohardaga led to the introduction there also of the system of bounties upon imports; some gratuitous relief was also given in the district. The favourable rains in the Bhagalpur Division enabled works to be closed in the first week of July, and all relief to be stopped by the end of the month; relief operations were also contracted in the Southal Parganas. In the Bankura district, after a break in the rains early in the month, the ensuing copious fall caused floods, which did some damage. In the Patna Division it was now thought that the numbers in receipt of gratuitous relief might be safely reduced to some extent. In doubtful cases relief in the villages was

refused, while the recipients were given the option of going to relief kitchens; in the event of their being unable to fall back on their relatives or on private charity for support.

The general contraction of relief operations made steady progress almost everywhere during August, favoured by good rain and satisfactory crop prospects, and the total numbers on relief at the end of the month were 335,776 only, of whom 81,987 were upon works. The total had been the lowest touched since the first week in January. The procedure for closing the works was carefully considered, and in the Patna Division it was decided that where the *bhadoi* crops were good, relief works should all be closed by the 1st September; but that in tracts where there was little or no *bhadoi*, they might, if necessary, be kept open till the middle of the month. Gratuitous relief was to be continued some time longer, but was to be cut down; children were to be fed in kitchens, and the acceptance of cooked food was to a greater extent to be made the test of the needs of adults. It was hoped that it would be possible to close all operations by the 1st October. In Champaran piece-work was introduced everywhere except on works about to be closed, in accordance with the principle enunciated by the Famine Commissioners, that at the close of the famine a system of piece-work with descending rates might be used to induce workers to resume their ordinary employment. In Chota Nagpur the rain was favourable, and as the new crops came upon the market, prices took a turn for the better. Relief operations were therefore closed by the end of the month in Palamau and Hazaribagh entirely, and as regards test works in Lohardaga also. In Manbhum the situation was not so satisfactory; the out-turn of the *bhadoi* crops was not so good there as elsewhere, and there was a certain amount of labour in need of employment now that the transplantation of the rice was finished. In Bankura too it was not found possible to contract operations as much as elsewhere, but in the Sonthal Parganas relief ceased from the middle of the month. In the Presidency Division operations were wound up in all three affected districts.

During the months of September and October all famine operations were brought to a close. By the end of September the total numbers in receipt of relief, which at the commencement of the month had stood at 224,297, had been reduced to 41,115, and by the end of October it might fairly be said that famine relief was at an end. The last district in which relief was being given to any extent was Manbhum, the conditions of which have been referred to. An attempt was made to close the works at the end of August, but it was found necessary to re-open them, and even although greatly reduced rates were offered, they were not finally closed till the end of October. In the Patna Division works were closed about the middle of September, the labourers being dismissed to their homes with valedictory doles from the Charitable Relief Fund, and on the 14th October the Commissioner was able to write:—

“ Nothing could be more prosperous than the present agricultural outlook. The *bhadoi* crop has proved more than an average all over the Division (except, perhaps, in Patna), even though it was damaged by floods in South Bihar; the *aghani* rice bids fair to be well above the average, if not a bumper crop, everywhere, and the moisture for the *rabi* is everywhere ample, and sowings have already begun.”

Similar favourable reports were received from the other Divisions of the Province, and the relief operations of 1897 ended with every reason for hope that the disastrous effects of the year would soon have passed away and be forgotten.

CHAPTER V.

THE FAMINE RELIEF ORGANISATION.

The organisation of charges and circles approved by the preliminary Famine conference at Muzaffarpur in December has already been indicated, and as distress spread from one district to another, the same system was adopted in each. The final division of each affected district is shown below:—

DIVISION.	District.	Number of charges.	Number of circles.	AVERAGE AREA IN SQUARE MILES OF EACH.		AVERAGE POPULATION OF EACH.	
				Charge.	Circle.	Charge.	Circle.
1.	2.	3.	4.	5.	6.	7.	8.
FARUKH	Shahabad	6	31	330	78	76,400	18,190
	Saran	7	63	335	37	331,602	35,768
	Champaran	8	71	410	46	337,433	26,189
	Muzaffarpur	11	94	243	28	209,737	24,648
	Darbhanga	13	90	245	33	201,465	20,804
	Total	45	330	193	37	214,307	27,196
SYNDHIA	Bhagalpur	2	6	250	83	162,600	54,106
	Sonhal Parganas	4	64	330	30	94,279	6,825
	Total	6	70	303	26	117,019	10,030
CHOTA NAGPUR	Hazaribagh	5	Nil.	1,404	Nil.	232,656	Nil.
	Palamu	4	24	1,230	104	140,192	24,805
	Manbhum	4	12	843	281	248,774	68,925
	Total	13	36	1,177	229	312,614	44,218
BURDWAN	Burdwan	4	7	263	150	103,225	58,996
PONDICHERY	Nadia	5	17	236	89	125,168	85,614
	Murshidabad	1	5	205	41	120,000	21,000
	Khulna	2	9	237	53	139,606	30,606
	Total	8	31	238	61	195,365	53,124
ORISSA	Puri	2	8	182	45	50,500	14,575

In the less severely affected districts the organisation was not so elaborate as in Bihar, but the principle of organisation was everywhere the same except in the Sonhal Parganas, where the local village agency, already existing and utilised in the district administration in the shape of committees of headmen of villages and leading raiyats, was employed practically to take the place of what were elsewhere the circle officers.

For the manning of the charges and circles the three sources of official, military, and non-official agency were drawn upon. The total number of Charge Superintendents appointed during the course of the relief operations, was 89, of whom 69 were Europeans and 20 natives, while 56 were official, 21 non-official, and 12 military commissioned officers. But in the most severely distressed tracts in Bihar, the charges were found too heavy for one officer to manage, and 17 Assistant Charge Superintendents were therefore appointed, of whom 14 were Europeans; 5 were drawn from the Government services, 9 were non-officials, and 3 were military non-commissioned officers. Out of 510 circle officers engaged from beginning to end of the famine, 52 were Europeans and 458 natives; 77 were already in Government employ, 424 were non-officials, and 9 were military non-commissioned officers. In all 114 officers and men were lent by the Military Department for famine work, and general testimony is borne by the District Officers to the value of their services and the efficiency with which they performed their unaccustomed duties.

In December 1896, the Inspector-General of Civil Hospitals was directed to arrange for the necessary medical aid in the affected districts. Drugs, instruments, and other supplies were obtained as needed from the medical depôt, and a special establishment was formed consisting, at its maximum, of one Commissioned Medical Officer, one Military Assistant Surgeon, two civil Assistant Surgeons, 21 Civil Hospital Assistants, 61 local native

doctors, and four compounders.

	Poor-house hospitals.	Famine hospitals.
Shahabad	3	3
Saran	6	4
Champaran	6	14
Muzaffarpur	6	16
Darbhanga	8	0
Hazaribagh	1	0
Khulna	6	0
Total	36	36

The establishment was distributed through the five affected districts of the Patna Division, and Khulna, and Hazaribagh working under the supervision of the Civil Surgeons. No extra medical aid was called for in the other affected districts. The marginal statement shows the number of hospitals open at poor-houses and on works in the seven districts where special assistance was given. The statistics of mortality in the famine hospitals will be considered together with the general

health of the affected districts.

The part played by the Public Works Department in the management of relief works in Bengal has already been referred to, and a special note by the Chief Engineer, Bengal, on the operations of the Department forms one of the appendices to the present narrative.

The decision that the Public Works Department should take over the administration of the large relief works in Bihar, as soon as their transfer could be arranged for, was come to at the Conference held at Muzaffarpur on the 15th January. Two circles were shortly afterwards formed with their headquarters at Darbhanga and Motihari respectively, and placed each under an officer of the status of a Superintending Engineer. In each circle three divisions were ultimately formed; in the former, two in Darbhanga and one in Muzaffarpur, and in the latter, two in Champaran and one (for a short time only) in Saran. Each division was in charge of an officer of the standing of an Executive Engineer with subdivisions in charge of Assistant Engineers. Some works were also undertaken by the Public Works Department in Nadia under the general supervision of the District Engineer. The staff ultimately employed under the Superintending Engineers consisted of 29 Executive and Assistant Engineers, with 84 Upper and 209 Lower Subordinates. A special branch office for the audit of accounts was opened with its head-quarters at Muzaffarpur, and was found of the greatest service. The collecting of the necessary staff took longer than had been anticipated: the *cadre* of the Public Works Department in Bengal was at a minimum, and the necessary additions could only be made by recalling officers from leave, indenting on the Government of India for the service of officers of the Royal Engineers, utilising the services of the existing District Engineers of the affected districts, and by recourse to the open market. A certain amount of subordinate establishment was transferred to the Public Works relief works from those under civil agency, but, as a rule, the Public Works Department demanded in their subordinates a higher degree of efficiency than the civil department had been obliged to work with and make the best of. These difficulties, coupled with the fact that a number of works were already in progress under the civil department, and that the differences in systems of account and other minor details made transfers difficult, delayed the making over of works to the Public Works Department, and even where most numerous, the works under the Department in the Patna Division were not much more than one third of those under civil agency. When at a late stage the Public Works Department establishments were complete, it was not found possible to make over so many of the civil works which were then nearing completion, as might be desired, and the total number of labourers who had to be provided for on the works under the Public Works Department was therefore less than the officers of that Department had originally anticipated, and than might have been supervised by them. The Lieutenant-Governor now thinks that it is perhaps to be regretted that he did not depute Mr. Glass to control the works on the spot.

Within the civil charges and circles and Public Works circles and divisions as thus constituted, was carried out the whole system of Government relief, which may be conveniently considered under two main divisions—

Broad principles of famine relief.

I.—Relief by offer of labour upon works either under the control of the civil officers or of the Public Works Department, and under various systems of work and wages.

II.—Gratuitous relief whether offered in the form of grain or money doles, or of cooked food to be taken at a kitchen or by residence in a poor-house.

The broad principles of famine relief had been finally settled and authoritatively laid down by the Government of India, and from them there was no departure in the present famine. The fundamental principle that the State would, as far as possible, undertake to prevent the loss of life from starvation is an axiom of famine administration; but on the other hand, the State does not undertake to do more than provide the means of bare subsistence to those actually in need of it. This subsistence is offered in two ways: to those physically incapable of work in any form, relief is given gratuitously, but from all capable of performing any work, however light, some return is demanded. The permanent benefit to the country resulting from the works undertaken is an object of importance, but the primary aim of these works is not to compensate the State for the expenditure incurred, but to test the necessity for the relief. This test takes the form of the performance of a certain amount of labour upon a relief work, usually the excavation of earth-work on a road or tank, canal or railway embankment. The amount of work to be done by the various descriptions of famine labourers varies with their physical strength and aptitude for the kind of work offered, and constitutes the task. The subsistence wage is calculated on the prevailing prices of food-grains and the quantity of food estimated as necessary to sustain life. The receipt of the full wage is dependent upon the performance of the prescribed task, but is subject to reduction to the lowest point consistent with the maintenance of health, should reasonable energy not be shown by the labourer.

Subsidiary and indirect methods of relief, such as the remission of land revenue, and the offer of loans and advances, will be dealt with separately, but these were but supplementary to the two great forms of relief indicated above, which constituted the backbone of the system.

CHAPTER VI.

RELIEF WORKS.

In tracing the history of the evolution of the system of relief works adopted in Bengal, it is only necessary to trace the course of events in the Patna Division.

At the commencement of operations in the Patna Division all works were under civil agency. This was in accordance with the provisions of the Famine Code that—

Organization adopted on test-works and early relief works. “Large works will be the backbone of the system of relief in the later stages of famine while small works should be used to the utmost in the early days of the scarcity..... By far the greater part of relief works, if not all, will ordinarily be carried out from local funds by the District Board, and will chiefly employ unskilled labour, and the works carried out by the Public Works Department will consist of only large projects, such as railways, canals, etc., specially sanctioned, and will employ only able-bodied labourers.”

The test-works which were opened in the early stages of famine were therefore for the most part ordinary District Board works converted into test-works, which were conducted usually from the District Board funds and under the supervision of the District Engineer and his subordinates. The classification of labour adopted was that prescribed in the Famine Code, namely—

- (a) Able-bodied professional labourers accustomed to the kind of work they are engaged on.
- (b) Able-bodied labourers, but not accustomed to that kind of work.
- (c) Able-bodied persons who are not labourers.
- (d) Persons who are weakly but still fit for light employment.

At the Conference held at Sonapore the Lieutenant-Governor laid particular stress on the necessity of exacting from the outset as a test of distress, the full tasks prescribed in the appendices to the Bengal Famine Code, and the Chief Engineer was at the same time requested to have tables drawn up showing the tasks to be demanded for varying lengths of lift and lead. With the help of the instructions laid down in the Code individual Collectors worked out the task to be demanded and the rate of wages to be paid. The people were encouraged to form themselves into gangs, as contemplated in the Code, but difficulties were from the first experienced owing to the varying size and composition of such gangs, and to a sudden rush of labourers to the works. At this stage the want of even an elementary technical knowledge on the part of a large portion of the inferior staff was found to be a serious impediment to the speedy organisation of the labour which came flocking to the works. As distress deepened and the organisation of Charge Superintendents was introduced, test works were converted into regular relief works with a properly constituted staff for each, working under the general supervision of the Charge Superintendent. The supervising staff on a fully organised work under civil agency subject to local variations, and outside North Bihar, to a generally less elaborate organisation, usually comprised—

- (a) An officer in charge.
- (b) A sub-overseer.
- (c) A cashier.
- (d) A gang muharrir or mates in charge of a varying number of separate gangs of labourers.
- (e) Peons, water-carriers, and treasury guards.

If works were small, one officer was placed in charge of more than one work. The Charge Superintendent exercised general supervision over all relief operations in his charge both on works conducted by civil agency and in gratuitous relief. The circle officers in Bihar had no connection with the works in progress, their duties being confined to the management of the gratuitous relief,